JPRS 78849

27 August 1981

USSR Report

AGRICULTURE

No. 1295

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MAJOR CROP PROGRESS AND WEATHER REPORTING

HARVESTING OF SPIKE CROPS BEGINS IN KAZAKHSTAN

Moscow TRUD in Russian 26 Jun 81 p 1

[Article by K. Borisov (Alma-Ata): "Kazakhstan Begins Harvest"]

[Text] The dry and warm days that have replaced the prolonged spell of bad weather have accelerated the development of grains in Kazakhstan. Farmers of the southern oblasts have begun mass harvesting of wheat, barley and other spike crops.

The first harvest of the Eleventh Five-Year Plan has been successful for the sovkhozes and kolkhozes of ChimkentskayaOblast. In Pakhtaaral'skiy Rayon, for example, they are threshing an average of 29 quintals of grain per hectare. The productivity is even greater in the Dzhetysay Oasis. Here the farms are gathering an average of 40-42 quintals of wheat from irrigated land--almost twice as much as last year.

The path to success has not been an easy one for agricultural workers of the oblast. There was an unusually small amount of snow during the winter. When the spike crop began to grow there was a critical shortage of moisture on the fields. A difficult struggle was waged everywhere to save the planted areas: irrigations were done 24 hours a day and detachments for fertility and plant protection operated with a maximum load. And it was as though the weather gave way to the friendly aggressiveness and purposefulness of the grain growers--frequent and abundant rains came.

The neighbors of the Chimkentskaya workers, the field workers of Dzhambulskaya Oblast, were not successful. The rain clouds bypassed a considerable proportion of their planted land. Therefore in a number of rayons the grain was scorched by the spring and summer heat, and so the wheat and barley did not manage to reach their full growth. In order to avoid losses it was necessary to adapt the combines for a low cut. Special commissions including specialists of sovkhozes and kolkhozes, members of working posts and labor veterans are receiving the mowed areas.

It is no less difficult to harvest the grain than to grow it in the south of Kazakhstan. Each year the natural and climatic conditions test the machine operators for their mastery.

"The main thing is to maximally reduce the time periods for the harvest," says an experienced combine operator of the Darbaza Sovkhoz in Chimkenstskaya Oblast, A. Turapov. "It is almost time for the hot winds to come more frequently from the Kyzylkumskaya and Muyunkumskaya deserts. And this is tantamount to a loss of the crop--a large part of the grain sheds."

All the harvest and transport complexes on the farms of these oblasts have become accustomed to a continuous work rhythm. The technical equipment is in operation on two shifts almost everywhere. Machine operating personnel have been trained in rural vocational and technical schools and on the farms in courses of the winter general training system. Subdivisions of Goskomsel'khoztekhnika are rendering a great deal of assistance to the grain growers. They have taken responsibility for a considerable part of the technical servicing of machines. The combine operators have committed themselves to completing the harvest in two or two and a half weeks.

Drivers, threshing workers and procurement workers have joined the machine operators. Operational control centers are in operation at the large grain receiving enterprises. Each day highly skilled specialists draw up hourly schedules for the delivery of the crop into the state grain bins, depending on the quality of the grain on the kolkhozes and sovkhozes, the availability of transportation that is in good repair and the course of the loading of the elevator capacities. Almost all of the wheat, barley and other spike crops are transported in large-cargo truck trains. The capacity of the storage facilities has been increased at the elevators, the weighing equipment has been expanded, and additional unloaders with increased capacities have been installed.

Cooperating personnel are creating the necessary conditions for the highly productive labor for participants in the harvest. Upon the suggestion of trade union committees, they have been included in the harvest and transport complexes on the majority of kolkhozes and sovkhozes. About 300 motorized stores follow a route that has been coordinated with the trade union committees of the farms. Temporary dining rooms, buffets and stores have been opened at the field camps and near the grain routes. Since the height of the harvest frequently coincides with the highest temperature, the enterprise of the oblast consumers' unions have sent out tens of thousands of additional decaliters of cool drinks.

Having started on the farms of Chimkentskaya and Dzhambulskaya oblasts, the front of the mass harvest in Kazakhstan will now expand rapidly each week. Machine operators of Alma-Atinskaya and Taldy-Kurganskaya are already in the starting positions The final preparations for the harvest are in progress in Semipalatinskaya, Aktyubinskaya and Ural'skaya oblasts. By the middle of August the farmers of the virgin land will enter the battle for a large grain crop. This is the country's main base for producing strong strains of wheat.

Agricultural workers of the republic, having planted 25 million hectares of arable land in grain this year, are striving to obtain 28-29 million tons of grain and to overfulfill the plan for its sale to the state.

11772
CSO: 1824/368

PLANTING OF CORN FOR GRAIN COMPLETED IN KAZAKHSTAN

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 26 May 81 p 1

[Article: "Planting Completed"]

[Text] Farmers of Alma-Atinkskaya, Dzhambulskaya and Chimkentskaya oblasts have completed the planting of corn for grain. The planting of its seeds is also in full swing in Taldy-Kurganskaya, Semipalatinskaya and a number of other oblasts. The rates of planting for corn for silage are increasing on all farms of the republic.

The experience of the leading farms in Panfilovsky Rayon in Taldy-Kurganskaya Oblast, Enbekshikazakhskiy, Kaskelenskiy and Uygurskiy rayons in Alma-Atinkskaya Oblast and Sayramskiy and Leninskiy rayons in Chimkentskaya Oblast show that with a creative approach to agrotechnology it is possible to obtain stable yields of grain from corn at about 100-120 quintals, and green mass--700-800 quintals and more per hectare.

One of the important and effective measures for increasing the production of corn is to cultivate it on an industrial basis with extensive application of the achievements of science and advanced practice.

One of the major elements in industrial technology is treatment of the fields with herbicides. Eradikan has proved to be the best of them. Its great effectiveness in the fight against weeds brings about a 1-2-fold reduction of interrow cultivation and a reduction of the expenditures of annual labor in weeding, and also contributes to saving on valuable planting material. When Eradikan was used on the Kolkhoz imeni Lenin in Enbekshikazakhskiy Rayon in the capital oblast by A. Mamlayev's team, they obtained 139.6 quintals of corn per hectare as against 116.6 quintals from the planted areas that were treated with 2.4D. The same difference was noted by the teams of A. Amzayev, M. Nazimov and others. Moreover, on the farm as a whole the production cost of a quintal of grain turned out to be 1.5 rubles less than with a crop that was raised according to the old technology.

Interrow cultivations of the planted areas is a peculiarity of industrial technology on irrigated land. They are necessary in order to cut the irrigation furrows along with top dressing and loosening of the soil after irrigation. At the same time, with the new technology a great effect was produced by eliminating the interrow cultivations and top dressing before the cutting of the irrigation furrows. At the

Kaskelenskoye experimental farm, with two interrow cultivations and top dressing with nitrogen before the cutting of the furrows, the yield amounted to 98.1 quintals, with one cultivation--111.6, and without it--114.1 quintals per hectare.

The extensive introduction of industrial technology requires an advanced science of production in all stages of work as well as strict fulfillment of agrotechnical requirements.

11772
CSO: 1824/368

MAJOR CROP PROGRESS AND WEATHER REPORTING

HARVESTING WORK EXPANDS OVER LARGER AREAS

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 20 Jun 81 p 1

[Article by Yu. Livinskiy (Chimkentskaya Oblast): "Harvest Boundaries Expand"]

[Excerpts] The harvest front is expanding each day on the grain fields of Southern Kazakhstan. The farms of eleven out of the fifteen rayons are already harvesting grain spike crops. More and more harvesting equipment is going out onto the fields with ripe grain.

The farmers of the oblast have raised a good crop this year. In response to the decisions of the 26th CPSU Congress, they revised their previously adopted commitments and took on new, increased ones--to sell the state no less than 10 million poods of grain in excess of the plan. Since the very beginning of the harvest there has been competition among machine operators for highly productive utilization of technical equipment and excellent quality of work. The grain growers intend to complete the harvest in 10-12 working days.

The farmers of Kelesskiy Rayon are conducting the harvest of spike crops at shock rates. They have already mowed and threshed the grain for more than 20,000 hectares. The daily output per combine has been increased to 16 hectares. The sale of grain to the state is proceeding simultaneously with the harvesting.

Machine operators of Chardarinskiy Rayon completed the harvesting of spike crops from nonirrigated land, which exceeds 15,000 hectares, in just a few days.

A couple of days ago a red caravan delivered the first thousands of tons of grain from the new crop to the Saryagachskiy receiving point.

"In the next few days," says the first secretary of the party raykom, A. Kazhamsugirov, "we shall increase the daily delivery of grain to 5,000 and more tons."

Under the Tenth Five-Year Plan the farmers of Saryagachskiy Rayon increased the per-hectare productivity by 5 quintals and increased the average annual sale of grain from 17,000 to 47,000 tons. Responding with deeds to the decisions of the 26th CPSU Congress, under the new five-year plan they intend to increase the productivity to 20 quintals. Even in the first year the farms of the rayon are promising to sell the state 62,000 tons of grain, twice the national economic plan.

Farmers of Leninskiy Rayon, the second largest grain supplier in the oblast, are striving to fulfill two annual plans. They are promising to gather 20 quintals of grain from each hectare and to sell the state 100,000 tons of it.

The grain has lodged in the rayon this year. The harvest must take place under difficult conditions. But the farmers are filled with resolve to conduct the harvest in the shortest possible periods of time and to fulfill their increased commitments honorably.

The scope of harvesting work is expanding each day in other rayons as well. "Speed and quality!" This motto has become the militant password for grain growers of the oblast in the struggle for a large crop.

11772
CSO: 1824/368

SARATOVSKAYA OBLAST GRAIN HARVEST OPERATIONS

Moscow SEL'SKAYA ZHIZN' in Russian 25 Jul 81 p 1

/Article by A. Mochalov, Saratovskaya Oblast: "Harvest Operations in Volga Region"/

/Excerpts/ The grain growers are quite aware: the hot summer is imposing especially tense work rates and raised requirements with regard to the quality of the work. Indeed, a delay in harvesting the wheat of just 4-5 days, compared to the optimum period, can cause grain losses amounting to 2 quintals and such losses will double if a greater delay is tolerated. Such information is available at many farms throughout the oblast. The machine operators in Yershovskiy Rayon are not overlooking it.

The measures being undertaken by the farms to protect the harvest are generally typical of this year's busy harvest season. As a rule, the units have been adjusted and hermetically sealed in a reliable manner in the interest of preventing grain losses. The bodies of the motor vehicles have been sealed and equipped with covers. The mowing is being carried out at the lowest cutting and the threshing of the windrows -- in accordance with the optimum regime for each specific tract.

In particular, fine work is being performed by the initiators of the competition for carrying out the harvest work in a rapid and high quality manner -- the farmers in Marksovskiy Rayon. It bears mentioning that this year they augmented their harvesting-transport complexes by the addition of teams for applying fertilizer and transporting the non-grain portion of the harvest to the farms. The oblast party committee and the oblast executive committee have approved this undertaking and they have recommended that it be disseminated to all areas. Since very little straw is obtained from low plantings, the use of toothless drag harrows has been rejected decisively throughout the oblast. The harvester-stackers of combines are being unloaded along the borders of fields or directly into tractor trailers. Only hay stackers are being employed in the zones of hay accumulation.

Since the beginning of the harvest campaign, similar work has been carried out on farms in Novouzenskiy, Dergachevskiy, Krasnokutskiy, Fedorovskiy, Sovetskiy and Tatishchevskiy Rayons. Crops which are free of weeds are usually harvested by means of direct combining. On weedy fields, the windrows are doubled. This repays with interest the amount of time spent using a modified technology for harvesting and transporting the straw.

At the present time, the harvest work is going forward along both shores of the Volga River. The oblast's kolkhozes and sovkhozes must harvest more than 4 million

hectares of grain crops. There are 1,179 mechanized complexes participating in the work. The task has been assigned of having each one of them increase the duration of combine operation to 18-20 hours daily. A reliable method for achieving this -- watch shifts.

It is no secret that some of the farms are experiencing a shortage of machine operators. Thus the city dwellers are going out to assist the agricultural workers. Saratov alone has sent out more than 4,000 individuals, all of whom are skilled machine operators, to assist in harvesting the crops. Two hundred and seventy harvesting-transport teams have been formed using workers from the oblast center and many have been assigned to mixed subunits. Together with the farmers, the city dwellers are displaying concern for the grain crops and, as a result of the work they are performing, the pulse of the busy harvest campaign is becoming stronger and more rhythmical.

7026
CSO: 1824/387

BRIEFS

EARLY RIPENING OF GRAIN CROPS--The main concern of all agricultural workers at the present time is that of harvesting the grain crops in a timely manner and without losses and protecting the yields obtained. It bears mentioning that the harvesting work this year will differ from that of previous years and have its own distinctive peculiarities. These peculiarities must be taken into account when planning the various organizational and technological measures, depending upon the conditions prevailing at each farm. The weather conditions account for a number of the peculiarities associated with the growth of grain crops. The spring grain crops bushed out somewhat worse than in previous years; the density of a large portion of the winter crop areas is satisfactory and ranges from 350 to 450 ears per square meter. The driving rainfall which occurred during June and which was accompanied by strong winds resulted in the lodging of a portion of the winter rye, wheat and barley plantings. The rapid accumulation of heat served to accelerate the developmental phases for the winter and spring grain crops. Thus the commencement of ripening of the grain crops occurred somewhat earlier than the average established over a period of many years. [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 16 Jul 81 p 2] 7026

CONTINUOUS FLOW OF GRAIN--Brest, 22 Jul--The oblast's grain receiving enterprises and elevators are receiving a continuous flow of grain from the new harvest. The initial 1,000 tons of grain have been received at the Brest Grain Products Combine. "For the most part, the grain is clean and dry and requires almost no additional treatment" stated the deputy chief of the oblast's grain products administration A.N. Oleynikov, "Following the example set by workers at the Brestskiy Sovkhoz, many of the oblast's farms built cleaning lines having a capability of 120 tons of grain daily and they equipped their drying areas. The pause between the additional processing of the grain and its delivery to the elevators has been reduced to a minimum. Sel'khoztekhnika and the motor vehicle combines allocated 514 motor vehicles and more than 100 motor vehicle trains were formed. Their drivers, in keeping with the example set by their colleagues at Orsha and Rechitsa, have joined in the competition to deliver the grain of the new harvest to the procurement points in a timely manner and without losses. [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 23 Jul 81 p 2] 7026

SLOW SOWING WORK--Favorable weather conditions are promoting the rapid and high quality carrying out of the spring sowing campaign. The farmers in Mozyrskiy and Maloritskiy Rayons are taking full advantage of these conditions. More than 90 percent of the spring grain and pulse crops called for in the plan have already been

sown here. The farms in Lyubanskiy, Pruzhanskiy and Shchuchinskiy Rayons recently increased the tempo of their sowing work. However, for the republic as a whole the sowing work is proceeding slowly. By 11 April, the spring grain and pulse crops had been sown on an area of 293,400 hectares, or 16.5 percent of the plan. [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 12 Apr 81 p 4] 7026

SPRING WORK REQUIREMENTS--The present cold snap must not affect the course of the field work. The optimum sowing periods are at hand in all areas and those individuals will win out who do not waste 1 hour in the field. In those areas where the weather conditions permit, the sowing of the grain crops and planting of potatoes must be continued; the rates for transporting the fertilizers from the farms and placing them in the soil must be intensified; the potato seed must be prepared for planting and it must be protected from nighttime frosts; the grasses must be tended; herbicides must be applied more rapidly in behalf of the corn, sugar beets and food root crops; in connection with the active growth of weeds, an aggressive campaign should be waged against them -- by means of harrowing and inter-row shallow plowing, so as to destroy them prior to the seedling and during the "white thread" stages, thus protecting the nutrients for the cultivated plants; to prepare the equipment used for the chemical protection of plants against weeds and diseases. The yields will be richer if the sowing work is performed in a better manner and if more reliable protection is provided for the plantings. [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 25 Apr 81 p 1] 7026

VITEBSKAYA OBLAST GRAIN OPERATIONS--Grain harvesting operations are being carried out from the southern rayons to the republic's northern borders. The farms in Vitebskaya Oblast have joined in the harvest work. A BELTA [Belorussian News Agency] correspondent has been informed by the USSR Ministry of Agriculture that the early and irregular ripening of the grain crops, which occupy approximately 3 million hectares throughout the republic, required flexible tactics for the busy harvest season. Multiple purpose detachments, created on all of the kolkhozes and sovkhozes, are maneuvering the equipment in an efficient manner, thus ensuring interaction for the entire harvesting conveyer line and they are carrying out direct combining work. The two-stage harvesting method is being employed in those areas where the grain crops are lower and the grain damp. Towards this end, there are approximately 7,000 harvesters on the farms which are capable of laying out in windrows up to one fourth of the grain crop areas. The grain is being delivered to the granaries on schedule and in a rhythmic manner. The capabilities of the grain thrashing floors and dryers have been increased. Their one-time capability has been raised to 720,000 tons. In intensifying the harvest tempo and having raised a reliable barrier against grain losses, the farmers are persistently striving to fulfill their socialist obligations undertaken for the first year of the five-year plan. [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 24 Jul 81 p 1] 7026

TENDING OF WINTER CROPS--The optimum periods for applying top dressings to the winter crops have expired in the republic's southern rayons. However, this work has been carried out in Brestskaya Oblast on less than 78 percent of the areas and in Gomel'skaya Oblast -- 86 percent. The farms in Grodnenskaya, Minskaya and Mogilevskaya Oblasts have also fallen behind in applying top dressings to their winter crops. The farm leaders and specialists should be reminded that a delay of just 7 days in applying top dressings to the winter crops, compared to the optimum

periods and based upon scientific data, results in a 7-10 percent reduction in the yields of winter crops. For the rapid completion of the top dressing work, it will be necessary in all areas to include all of the ground equipment i the work and to utilize the assistance of aviation more effectively. Where it is impossible to employ machines, the fertilizers must be applied manually. Simultaneously with applying a top dressing, the harrowing of the winter crops should be carried out along a broad front. This agricultural method ensures not only the retention of moisture, which is very important considering the conditions experienced this spring, but in addition it promotes the development of new roots and shoots and the removal of dead plants and it improves the aeration of the soil. Timely and high quality harrowing, according to data supplied by the Belorussian Scientific Research Institute of Farming, raises the cropping power of the winter crops by 1-2 quintals per hectare. Farmers! Do not waste time when tending your winter crops. Carry out this work in a timely and high quality manner. [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 9 Apr 81 p 1] 7026

FINE SOWING CONDITIONS--Minsk--The present generation of farmers cannot recall such a pleasant spring period as this present one. The republic's grain growers completed their sowing of grain and pulse crops 2 weeks earlier than usual. They usually complete their planting of potatoes in the middle of June, especially in the northern oblasts. At the present time, they have already been planted on 80 percent of the areas set aside for this crop. In a few days time, the planting of potatoes and sowing of corn will be completed. The sowing of forage crops -- beets and turnips -- will be completed in roughly a week's time. As a rule, spring arrives in Vitebskaya Oblast 2 weeks later than it does in Minskaya Oblast. But this year the orchards ripened simultaneously throughout the republic -- in both the south and the north. The farmers are pleased by the growth and density of the winter crops and by the healthy seedlings of the spring crops. At the present time, with the grasses now in the growth stage, it can be stated that the difficult wintering period has ended and that the livestock have returned to their pastures. [Text] [Moscow IZVESTIYA in Russian 14 May 81 p 1] 7026

PRE-SOWING CULTIVATION--Vitebsk, 8 May--Pre-sowing cultivation, the technology for which was recommended by local efficiency experts, has accelerated considerably the ripening of the water-logged soils at the Leninskiy Put' Kolkhoz in Postavskiy Rayon. Machine operator Gennadiy Maksimovich prepares up to 90 hectares of arable land annually. His unit operates in a trouble-free manner. Prior to the beginning of the sowing operations, more than 40 broad-swath units were produced on farms throughout the rayon and they are now in use. [by V. Legan'kov] [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 9 May 81 p 1] 7026

TRADITIONAL IMPLEMENTS ABANDONED--Gomel'--Workers at the Zhlobinskiy Rayon Sel'khoztekhnika in Gomel'skaya Oblast have abandoned the traditional rakes and pitchforks used in haying operations. They have placed in operation the old grain harvesting combines upon which, in place of the thrashing drums, they have installed tubular conveyers with fans. The whirlwind created in this manner "rakes up" and "loads" 10-15 hectares of meadow hay daily. According to work carried out by Zhlobino innovators, grain harvesting machines that have been written off are being re-equipped to serve as feed harvesting units at many associations in Belorussia. [Text] [Moscow TRUD in Russian 31 May 81 p 1] 7026

MULTIPLE-PURPOSE UNITS--Mogilev, 21 Apr--Sowing operations are in full swing on the kolkhoz and sovkhoz fields. This year, in the interest of accelerating this work, many farms have resorted to the use of broad-swath units. In all areas, two multiple-purpose RVK-3 units equipped with containers and hoses for applying ammonia liquor are being connected up to powerful tractors. Now, while making only one pass, the crew of such a unit is able to carry out an entire complex of operations associated with preparing the soil and topping it off with liquid fertilizers. [by I. Shlyk] [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 22 Apr 81 p 1] 7026

AN EARLY SPRING--Soligorsk, Minskaya Oblast--Spring arrived in Belorussia 2 weeks earlier than usual. The farmers at the Novoye Poles'ye Sovkhoz completed their sowing of grain crops and annual grasses in rapid fashion -- in just 3 days. The machine operators on farms in Minskaya Oblast are carrying out their field work on an all-round basis, making use of broad-swath and multiple purpose units. This is making it possible to till the soil, apply fertilizers and carry out the sowing work simultaneously. The associations of Sel'khoztekhnika displayed concern in advance for preparing the powerful tractors and equipping them with a set of attachable implements. [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 10 Apr 81 p 1] 7026

SPECIAL CORN SEED TREATMENT--Minsk--The Belorussian machine operators are planting corn seed that has been treated with growth stimulants and covered with a protective polymer film. This so-called hydrophobic treated seed has made it possible to commence the sowing of this valuable forage crop considerably earlier than usual. Corn is being grown on 200,000 hectares of arable land throughout the republic. [Text] [Moscow GUDOK in Russian 19 May 81 p 1] 7026

GOMEL'SKAYA OBLAST GRAIN HARVEST--Gomel', 17 Jul--The grain crops on fields in the southernmost oblast of Belorussia -- Gomel'skaya Oblast -- have ripened unusually early. Mass harvesting work has commenced here. Four hundred and fifth harvesting-transport detachments are participating in this work. The detachments have bee staffed with personnel for double shift operations. [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 18 Jul 81 p 1] 7026

BUCKWHEAT SOWING COMMENCES--Minsk--The farmers in the Belorussian forest district have commenced sowing buckwheat. The cultivation of this crop has been entrusted to specialized mechanized teams. The seed of highly productive Belorussian bred varieties has been prepared for sowing on the entire area of 44,000 hectares. [Text] [Moscow TRUD in Russian 16 May 81 p 1] 7026

BUCKWHEAT VARIETIES UNDER CULTIVATION--The farms in Brestskaya Oblast have commenced sowing buckwheat. The sowings of this important groat crop are being concentrated here on farms which have accumulated rich experience in its cultivation. The farmers are strictly observing the agrotechnical requirements. Buckwheat, a crop having a short growing season, is particularly demanding with regard to soil conditions and nutrients. This year, two varieties of buckwheat are being cultivated -- Yubileynaya-2 and Chernoplodnaya. The sowing is being carried out using the wide-row method, which makes it possible to till the inter-row spacings throughout the summer using mechanisms and to maintain the fields in a weed-free condition. This ensures an increase in yield of from 3 to 4 quintals per hectare. [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 17 May 81 p 1] 7026

CORN SOWINGS EXPANDED--Grodno, 23 Apr--Last year the farmers at the Rossiya Kolkhoz in Shchuchinskiy Rayon planted corn on 100 hectares. Hydrophobic treated seed was

employed for sowing, that is, seed that was covered with a special protective film, thus making it possible to sow the seed considerably earlier. Despite the extremely unfavorable weather conditions, 250 quintals of fodder were obtained from each hectare. During previous years the yield exceeded 450 quintals. The farmers believe that the hydrophobic treatment increases the yield by an average of 50 quintals. The decision was made this year to double the corn sowings. Fine predecessor crops were selected and 90 tons of organic fertilizer and the required amount of mineral fertilizer were applied to each hectare. Seed for the Moldavskiy and Sterling varieties was supplied for the entire area. The corn sowings are being expanded by 3,000 hectares throughout the oblast. Use will also be made of hydrophobic-treated seed. The decision has been made to employ such seed for sowing more than 70 percent of all of the areas used for this crop. Such seed is being supplied to the farms by the Shchuchinskiy Rayon sel'khozkhimiya. A special warehouse was built for this purpose there. Technological lines for the hydrophobic-treatment of seed have been installed in it. [by K. Kleban] [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 24 Apr 81 p 1] 7026

A CHANGING LANDSCAPE--Novouzenskiy Rayon, Saratovskaya Oblast--On the map of Saratovskaya Oblast, in the extreme southeast portion, one notices the irregular form of a ridge. It is here that the kolkhoz is located. Here one finds scorched earth and balls of tumble-weed being blown about by the wind. However, the farmers have undertaken serious measures aimed at changing this dismal landscape. It was several years ago that the long-awaited Volga water reached here after traveling several hundreds of kilometers via the Saratov Canal. And now the orange colored steppe is beginning to turn green in color as a result of the silver streams of water issuing from the sprinkling units. In Novouzenskiy Rayon alone, 15,500 hectares are under irrigation. No longer is the grass crop here being burned out by the sun. [by M. Ovcharov] [Text] [Moscow IZVESTIYA in Russian 25 Jul 81 p 1] 7026

IRRIGATED FORAGE FIELDS--Volgogradskaya Oblast--The first half of the summer in Volgogradskaya Oblast turned out to be dry. Despite the intense heat, those tracts upon which artificial rain was falling were quite attractive. Now and then rainbows appeared, almost as though they were emphasizing the importance of irrigation to the lower Volga region. This year, more than 150,000 hectares will be under irrigation. The principal purpose of such irrigation -- to provide animal husbandry with forage and to furnish no less than 550,000 tons of feed units, or one fourth of the overall requirements. How is this task being solved? [by V. Goncharov] [Text] [Moscow PRAVDA in Russian 21 Jul 81 p 1] 7026

GRAIN HARVEST COMMENCES--The farms in the southern part of Volgogradskaya Oblast have commenced the selective mowing of winter grain crops. The grain crops here are difficult this year. They have been affected by the late spring and the unusually early and prolonged intense heat. The price of each ear and each grain has been high for the farmers. Commencing with the very first hours of the harvest campaign, a great amount of attention has been given to combating both grain and straw losses. All of the units have been adjusted for a low cutting. The agricultural specialists have recommended many devices for accelerating the harvest campaign. More than 1,000 harvesting-transport complexes and detachments will be employed for carrying out the harvest work this year on farms throughout the oblast. [Text] [Moscow KRASNAYA ZVEZDA in Russian 27 Jun 81 p 1] 7026

SECONDARY SOWINGS--Saratov--This summer the oblast s farmers are compensating for their shortage of forage, caused by complicated weather conditions, by means of secondary sowings of feed crops. Sudan grass, millet, corn and sunflowers are being sown on fields from which crops have just been harvested. Winter grain crops are

the best predecessor crops for forage crops sown during the summer. The Saratov workers plan to carry out secondary sowings on an area of no less than 200,000 hectares [Text] [Moscow TRUD in Russian 26 Jul 81 p 1] 7026

GRAIN HARVEST PLANS--Kuybyshev--The oblast s farms have commenced their mass harvesting of grain crops. The heat which continued throughout the growing and ripening periods for the grain crops caused corrections to be entered into the strategy of the farmers. The decision was made to harvest the spring crops directly, at the lowest cutting. With the aid of an electronic computer, schedules were developed for delivering the grain to the elevators. The Kuybyshev farms plan to complete their grain harvesting work in just 15-18 days. [Text] [Moscow TRUD in Russian 26 Jul 81 p 1] 7026

COMPLICATED HARVEST CONDITIONS--Kaliningrad--All of the farms in Kaliningradskaya Oblast have commenced their mass harvesting of grain crops. More than 2,000 combines are being employed for the mowing operations. The simultaneous ripening of the winter and spring crops and the large number of tracts having lodged grain crops have complicated the conditions of this year's harvest. At the present time, the farmers are attaching a high value to each good hour of time. In Pravdinskiy Rayon, for example, the machine operators cut down 1,000 hectares of grain crops during the first 2 days. [Text] [Moscow PRAVDA in Russian 2 Apr 81 p 1] 7026

HIGH EXPERTISE--Kursk--The grain harvesting complexes have departed the fields in Oboyanskiy Rayon -- the local machine operators were the first in Kurskaya Oblast to complete their harvesting of grain crops. Operating on the basis of the Ipatovo method, they stacked the straw immediately following the threshing work, they scuffled the stubble fields and they have already commenced their autumn plowing. The harvest operations in the oblast are nearing completion. At the present time, it is being carried out on the remaining one third of the grain crop areas. [Text] [Moscow PRAVDA in Russian 31 Jul 81 p 1] 7026

MASS HARVESTING OF GRAINS--Kirov--The mass harvesting of grain crops is underway in all of the oblast's rayons. The harvesting equipment includes 600 harvesting-transport complexes and 726 mechanized teams. The machine operators in Malmyzhskiy, Pizhanskiy and other rayons are displaying a high level of expertise. [Text] [Moscow PRAVDA in Russian 2 Aug 81 p 1] 7026

SUCCESSFUL BEGINNING--Kazan , 23 Jul--The hot and dry weather that has prevailed for more than a week has accelerated the beginning of the harvest work on the fields in the Tatarskaya SSR. The mowing of peas, which are being grown on more than 300,000 hectares, is being carried out in a majority of the rayons in the autonomous republic. The machine operators view this work as a general rehearsal prior to the mass harvesting of the grain crops. The farmers in Alekseyevskiy, Al'kayevskiy, Buinskiy, Mamadyshskiy and a number of other rayons have successfully commenced their mowing of peas. On a number of farms the machine operators have moved their combines out onto the winter rye fields. [by V. Goncharov] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 24 Jul 81 p 1] 7026

30-35 QUINTALS PER HECTARE--Astrakhan --The oblast's multi-purpose harvesting detachments have cut down the grain crops on one half of the areas allocated for these crops. The machine operators in Limanskiy Rayon have completed their mowing of grain crops. Here they have already commenced their threshing work. From some

tracts the farmers are obtaining 30-35 quintals of grain per hectare [Text] [Moscow GUDOK in Russian 24 Jul 81 p 1] 7026

STAVROPOL'SKIY KRAY GRAIN FIELDS--Stavropol , 23 Jul--Today the farmers in Stavropol'skiy Kray delivered their one millionth ton of grain to the state granaries. The collective obligation of the kray's kolkhozes and sovkhozes -- by the end of the busy harvest season, to ship no less than 900,000 tons of grain to the elevators, thus exceeding the planned task. Despite frequently changing weather conditions during the peak period of their grain threshing work, the grain growers in Neftekumskiy, Sovetskiy and Levokumskiy Rayons set a fine example in coordinated operations. They are already selling grain to the state over and above their annual plan. In transporting the crops grown on the Stavropol' steppes, the kolkhoz and sovkhoz drivers are being assisted by personnel sent out by industrial enterprises, specialized transport organizations and a number of military units. Regardless of departmental affiliation, all of the heavy freight tractors and motor vehicle trains have been subordinated to the dispatchers at the elevator centers for controlling grain deliveries. Motor vehicles with bodies having smaller capacities have been placed at the disposal of the chiefs of multiple-purpose combine detachments. The use of transport equipment according to this principle precludes the possibility of the harvesting equipment standing idle as a result of the untimely unloading of hoppers or obstructions on the threshing floors. There are many farms in the kray which plan to exceed their annual plan for grain sales to the state by a factor of 1.5-2. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 24 Jul 81 p 1] 7026

HIGH QUALITY WHEAT SALES--Krasnodar--The Kuban' farmers are selling high quality wheat to the state. In behalf of the obligations undertaken, approximately 1.5 million tons of strong and valuable grain have already been delivered to the elevators. [Text] [Moscow PRAVDA in Russian 31 Jul 81 p 1] 7026

ABOVE-PLAN GRAIN SALES--Stavropol'--The grain growers in three more of the kray's rayons yesterday began selling grain to the state over and above the plan. Approximately one half of the farms here have already exceeded their annual task for shipping wheat and barley to the elevators. [Text] [Moscow PRAVDA in Russian 31 Jul 81 p 1] 7026

GRAIN PLANS FULFILLED--Krasnodar--Yesterday the Kuban grain growers shipped grain to the elevators in behalf of their third millionth ton. More than 100,000 tons of wheat have already been delivered to the granaries from farms in the large grain rayon -- Ust -Labinskiy. The workers at the Ladozhskiy Sovkhoz and the Kolkhoz imeni Michurin, after having fulfilled their plans for grain procurements, became the first in the rayon to commence above-plan shipments of grain. [Text] [Moscow TRUD in Russian 2 Aug 81 p 1] 7026

EFFICIENT IRRIGATION OPERATIONS--Ordzhonikidze--The machine operators in the Severo-Osetinskaya ASSR, who have commenced their second foliar watering of corn, have converted over to an around-the-clock work regime. All of the sprinkling and pumping units and distribution stations have been included in the work. Fertilizer is being applied to the soil simultaneously with the irrigation water. In accordance with the recommendations of scientists at the Gorskoye Agricultural Institute, map-plans for the fields have been prepared on each farm. They include the watering schedules and norms. Under the conditions imposed by this year s dry summer, this will make it possible to utilize each cubic meter of water efficiently and economically. [Text] [Moscow PRAVDA in Russian 31 Jul 81 p 1] 7026

FOR STATE GRANARIES--Ordzhonikidze, 31 Jul--The farmers in Ardonskiy Rayon set a fine example in their skilful and efficient organization of the harvest operations in the Severo-Osetinskaya ASSR: today they became the first in the autonomous republic to fulfill their plan for selling wheat to the state. More than 5,000 tons of select grain have been delivered to the elevators. Having completed their harvest work in just eight working days, the combine operators are continuing to harvest grain crops on the fields of neighboring rayons. The harvest work in the Severo Osetinskaya ASSR has entered the final stage. In the interest of accelerating the work, equipment from steppe rayons has been transferred to the piedmont zones. Simultaneously with the harvesting work, the soil on farms throughout the republic is being prepared for autumn sowing. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 1 Aug 81 p 1] 7026

A DOUBLE LABOR VICTORY--Novoaleksandrovsk (Stavropol'skiy Kray), 31 Jul--The grain growers in Novoaleksandrovskiy Rayon in Stavropol'skiy Kray have remained true to their word. Today they achieved a double labor victory: the last windrow has been gleaned from the fields and at the same time the sale of grain to the state, over and above the annual plan, has commenced. The Novoaleksandrovsk workers have achieved a grain crop cropping power of 32.2 quintals per hectare. Simultaneously with the farms in Novoaleksandrovskiy Rayon, the farms in the Karachayevo-Cherkesskaya AO and in five other steppe rayons of the kray have commenced above-plan sales of grain to the state. The kolkhozes and sovkhozes in the steppe rayons of Stavropol'skiy Kray are following the example set by the initiators of the competition. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 1 Aug 81 p 1] 7026

INCREASED THRASHING RATES--Odessa, 24 Jul--The oblast's grain growers are thrashing grain crops on 31,000-33,000 hectares daily. In Tarutinskiy Rayon, a competition has been launched between the farms, harvesting-transport detachments and individual crews for the highly productive utilization of equipment. And here is the result. Compared to earlier when an average of 1,700-2,000 hectares of grain crops were thrashed daily, during the past few days the figure has been raised to 3,800 hectares. [Text] [Moscow SEL'SKAYA ZHIZN in Russian 25 Jul 81 p 1] 7026

170,000 HECTARES UNDER IRRIGATION--Odessa--Sprinkling machines are in operation on fields in the Black Sea region that have been set aside for the growing of winter crops. Each hectare of the future grain fields, with a correction being introduced for the hot and dry weather, will be given a full dose of the life-giving moisture -- up to 700 or more cubic meters. More than 170,000 hectares of arid land are under irrigation in Odesskaya Oblast at the present time. [Text] [Moscow TRUD in Russian 2 Aug 81 p 1] 7026

WINTER CROP PLOWING--Odessa--Hardly had the grain harvesting combines departed the fields in the Black Sea region, than their places were taken up by plowing units. The oblast's machine operators have begun plowing the soil on the second half of the areas made available following the grain harvest. The plowing personnel are working not as individual teams, as was earlier the case, but rather in the form of large mobile detachments. This is making it possible to use the units in a highly productive manner and to prepare the fields rapidly for the winter crops. Special attention is being given to the selection of the predecessor crops. The plans call for almost one fifth of the sowings to be carried out on bare fallow, thus ensuring high and stable yields of grain. [Text] [Moscow PRAVDA in Russian 31 Jul 81 p 1] 7026

ARMENIAN GRAIN HARVEST--Yerevan--The harvesting of grain crops from the fields in the Araratskaya Valley must now move on into the mountains of Armenia. A fine crop has ripened on the alpine grain fields. The main concern of the farmers -- to complete the harvest work in a rapid and high quality manner. They are being assisted in this regard by the introduction into practice of the watch-standing method of work. Taking into account the peculiarities of the mountainous relief, the mountain farms approved new and safer routes for the motor vehicle trains. Commencing with the very first days, operational dispatcher groups have been in operation for the purpose of directing the grain transport operations. [Text] [Moscow GUDOK in Russian 24 Jul 81 p 1] 7026

HIGH CORN YIELDS--Uzbek SSR--At the present time, the combines have already moved out onto the corn plantations in the southern regions of the republic. "This year, corn has been planted on 16,000 hectares in the Surkhan valleys," stated the 1st Secretary of the Oblast Party Committee, A. Karimov, The oblast's field crop growers intend to supply the state granaries with no less than 120,000 tons of high quality grain." The corn growers of Uzbekistan have on more than one occasion proven that they have learned how to obtain high yields of this crop. This year they have undertaken the following obligation -- to obtain 70 quintals of grain from each hectare. The gross yield must be 1.35 million tons and 4.3 million tons of silage must be laid away for the farms. [Excerpts] [Moscow PRAVDA in Russian 26 Jul 81 p 1] 7026

HIGH WINTER WHEAT YIELD--Chimkent--On the average, a yield of 100 poods of winter wheat has been obtained in the southern part of Kazakhstan. This is the result of extensive use of a Kazakhstan bred intensive variety -- Krasnovodopadskaya-210. On many tracts it has furnished up to 40 quintals of grain of a high food condition. Yesterday the farms in the zone began shipping Krasnovodopadskaya-210 for the purpose of augmenting the state seed resources. [Text] [Moscow TRUD in Russian 2 Aug 81 p 1] 7026

GRAIN HARVEST NEARING COMPLETION--Chimkentskaya Oblast--The harvest operations on the grain fields in southern Kazakhstan are nearing completion. The mowing and thrashing of grain crops are being carried out on the last thousands of hectares, located mainly in the mountainous zone. This year the oblast's farmers developed fine crops. Each hectare is furnishing an average of almost 15 quintals of grain. And in a number of rayons the average is 20-25. The highest yield -- 25.5 quintals per hectare -- is being obtained by the grain growers in Lengerskiy Rayon. The cropping power record is held here by the farmers of the Pobeda Kolkhoz. On the average, they are obtaining in excess of 40 quintals of grain. Yields of 30 quintals of grain are being obtained by the Pervomayskiy Sovkhoz, the kolkhozes Abay, Kommunizm and imeni Seyfullin in this same rayon and also by a number of farms in Sayramskiy and Tyul'kubasskiy Rayons. One distinctive feature of this year's harvest operations is the fact that the Ipatovo method for organizing the harvest work is being employed in all areas throughout the oblast. Notwithstanding the fact that a considerable area of the grain crops was lodged, the overwhelming majority of the multiple-purpose harvesting-transport detachments performed in an efficient and well coordinated manner. Both within the farms and throughout the rayons, high work rates were maintained and high quality harvest operations ensured as a result of the extensive maneuvering of the equipment. The shipping of the grain to the elevators is being carried out at a high tempo. Almost all of the oblast's rayons have already over-fulfilled their planned tasks for selling grain to the state and the farms in Algabasskiy, Bugunskiy, Leninskiy, Lengerskiy and Turkestanskiy Rayons have exceeded

their national economic plans by a factor of 1.5 or more. The oblast has supplied the granaries of the homeland with 25 million poods of grain. The sale of grain to the state is continuing. At the same time, seed and forage grain is being laid in. Meanwhile, the preparation of land for the new crops is proceeding at a maximum tempo on the tracts that have been mown. [by Yu. Livinskiy] [Excerpts] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 28 Jul 81 p 1] 7026

GRAIN DELIVERIES--Chimkent--The oblast's farms have commenced selling grain to the state. Yesterday the farmers in the Turkestan Steppe and Kelesskaya Valley delivered thousands of tons of barley and wheat to the receiving enterprises. The sovkhozes and kolkhozes in Chardarinskiy, Kirovskiy and Pakhtaaral'skiy Rayons are preparing the grain for mass shipment to the elevators. The centers for exercising operational control over the movement of the crops are ensuring efficient work by all of the elements in the procurement production line. [Text] [Moscow GUDOK in Russian 19 Jun 81 p 1] 7026

ABOVE-PLAN GRAIN SALES--Chimkent--The farmers in Algabasskiy Rayon have obtained a high grain crop yield from non-irrigated lands in southern Kazakhstan. They shipped 10,000 tons of grain over and above the plan to the Chayanovskiy Grain Receiving Station. This success was achieved as a result of the use of progressive agricultural practices and a new and highly productive local variety of winter wheat -- Krasnovodopadskaya-210. The rayon's farmers plan to over-fulfill by almost twofold the plan for selling grain to the state. [Text] [Moscow TRUD in Russian 22 Jul 81 p 1] 7026

GRAIN CROP SOWING COMPLETED--Alma-Ata--The sowing of grain crops in the northern oblasts of Kazakhstan has been completed. The seed has been placed in the soil on 15.5 million hectares of fields. Rainfall, drops in temperature and even snow -- such were the complicated conditions which the farmers in the virgin land zone had to contend with this spring. But this did not prevent this large grain area of the country from carrying out its work during the best agrotechnical periods and in a high quality manner. [Text] [Moscow IZVESTIYA in Russian 4 Jul 81 p 4] 7026

GRAIN SALES COMMENCE--Ashkhabad--The farmers of Turkmenistan have commenced selling the grain of the new harvest to the state. [Text] [Moscow IZVESTIYA in Russian 4 Jun 81 p 4] 7026

DZHAMBULSKAYA HARVEST--Dzhambulskaya Oblast--The weather was no help to Dzhambulskaya farmers this year. There was almost no rain at the beginning of the summer and then the hot weather came without delay. Therefore the grain did not grow to its full height. But the grain growers countered the caprices of nature with good organization, experience and mastery. They are waging a difficult and persistent battle for the crop. The goal is to harvest the spike crops in maximally short periods of time and not to allow losses of grain during the harvest. [Text] [Alma-Ata KAZAKSTANSKAYA PRAVDA in Russian 20 Jun 81 p 1] 11772

BEGINNING OF HARVEST--Chimkentskaya Oblast--After abundant spring rains, a good yield of spring spike crops is ripening on the fields of Chimkentskaya Oblast. The farmers of southern Kazakhstan, inspired by the decisions of the 26th CPSU Congress, intend to overfulfill the plan for the sale of grain to the state in the first year of the new five-year plan. The repair of technical equipment is almost completed on the farms. The harvest-transport detachment and teams that have been created according to the Ipatovo method have been staffed with machine operators for two-shift operation. The southern rayons of the oblast have already begun selective harvesting of early spike crops. The first of them to begin were the machine operators of Chardarinskiy Rayon. "The first threshings are gratifying us," says the second secretary of the party raykom, V. Nenashev. "The barley on nonirrigated lands is producing 15 quintals per hectare, and on irrigated land the yield of grain spike crops will be considerably higher. On the whole the farmers of the rayon are striving to obtain an average of no less than 17 quintals of grain." On the eve of the harvest period, the traditional celebration of the new crop was held in Kelesskiy Rayon. At it the grain growers took on increased commitments--to sell the state 3,200 tons of grain in excess of the plan. The machine operators of a number of farms have begun selective mowing of barley. For the harvest period the rayon has organized 103 mechanized teams that are joined together according to the Ipatovo method into 11 harvest-transport complexes. It is intended to conduct the mowing and gathering of the grain in 10-12 days. In the next few days they will begin to harvest early spike crops in two of the largest suppliers of commercial grain in the oblast--Saryagachskiy and Leninskiy rayons. All the technical equipment is at the starting point here. Machine operators are awaiting the signal to begin work. [Excerpt] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 31 May 81 p 1] 11772

KAZAKH HARVEST--Chimkent--Farmers of the oblast began to harvest early spike crops yesterday. The harvest of barley and spring wheat is being carried out by machine operators of the left bank of the Syrdar'ya, the Turkestanskaya Steppe and the Kelesskaya valley. The competition for conducting the harvest in 10-12 days--one-third less time than usual--has been entered by 3,600 crews that are combined into complex harvest-transport detachments. The technical equipment is being operated on two shifts. Subdivisions of Goskomsel'khoztekhnika are rendering a great deal of assistance to the grain growers. They have taken on a considerable part of the responsibility for technical servicing of the machines and aggregates. Grain occupies more than a half million hectares in the oblast. In the Kelesskaya valley, for example, many sovkhozes are gathering 7-8 quintals of barley per hectare more than last year. The threshings on the wheat fields are even greater. [Text] [Moscow GUDOK in Russian 5 Jun 81 p 1] 11772

FIRST THRESHING--Chimkent--Farms of Southern Kazakhstan have begun to sell grain to the state. The farmers of the Turkestanskaya Steppe and the Kelesskaya valley have delivered thousands of tons of barley and wheat to the grain receiving enterprises. The kolkhozes and sovkhozes of Chardarinskiy, Kirovskiy and Pakhtarral'skiy in Chimkentskaya Oblast are preparing the grain for mass delivery to the elevators. The first year of the new five-year plan has proved to be a good one for Chimkentskaya grain growers. A large crop has been raised everywhere. On a number of farms of Kelesskiy Rayon, for example, it is 7-8 quintals per hectare larger than what was expected. The farmers intend to considerably overfulfill the plan for grain procurements. The farms of other rayons are also making significant adjustments to the previously adopted commitments for selling grain to the state. Storehouses have been carefully prepared for receiving the grain and technological lines have been reconstructed. They are equipped with large-cargo weights, highly productive automatic unloaders and automated sample takers. Railroad workers are taking up the relay baton for efficient processing of the grain from the new harvest. A well-arranged schedule for accelerated delivery of rail cars high-speed movement of the grain trains have been put into operation. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 19 Jun 81 p 1] 11772

KALMYK HARVEST--Not a minute of idle time for the harvesting aggregates in the fields--this is the motto with which farmers of Kalmykiya are working from having begun mass harvesting of grain crops. About 250 harvesting and transport complexes have entered the work together. The majority of farms have envisioned gathering the harvest in reduced time periods--10-12 working days. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 2 Jul 81 p 1] 11772

DON HARVEST--Rostov-on-Don--Decisive days of the harvest have come to the Don area. All rayons of the oblast have already begun mass harvesting. Having organized 24-hour operation of the harvesting equipment, the farms of Sal'skiy, Orlovskiy, Zimovnikovskiy and Milyutinskiy rayons have mowed the winter wheat from one-fourth of the fields. [Text] [Moscow PRAVDA in Russian 4 Jul 81 p 1] 11772

RIPE GRAIN--The grains have ripened in the valleys of Semirech'ye. The ripening of the grain crops was accelerated not only by the heat, but also by the prompt care for the fields. The first in Taldy-Kurganskaya Oblast to begin mowing the grain crops were the machine operators of Kerbulakskiy Rayon. They intend to gather the crop in reduced time periods. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 2 Jul 81 p 1] 11772

CSO: 1824/368

LIVESTOCK FEED PROCUREMENT

LATVIAN FEED CROP HARVESTING

Decree Provides Special Measures

Riga SOVETSKAYA LATVIYA in Russian 11 Jun 81 p 1

[Article from LatINFORM]

[Text] Latvian Communist Party Central Committee and the LaSSR Council of Ministers adopted a joint decree on supplementary measures to insure timely procurement of high-quality feeds and successful performance of other agricultural work in 1981.

The decree obligates the appropriate ministries and departments, regional party committees, executive committees of regional Councils of Peoples' Deputies, local agricultural bodies and managers of kolkhozes and sovkhozes and procurement organizations to insure timely harvest of all sown and natural grasses, including those from rough areas [neudobiya] and the procurement of high-quality feeds in 1981. Regional feed procurement staffs should direct and regularly inspect the performance of these operations.

Particular attention is devoted in the decree to the need for strict fulfillment and overfulfillment on each farm of plans for the procurement of hay, haylage, silage, grass meal and for the use of all reserves for supplementary accumulation of feed reserves.

Preparation of more than 300,000 tons of green mass and more than 150,000 tons of hay through the efforts of the supervising organizations and the able-bodied populace of cities, worker villages and rural settlements is called for.

The decree obligates the LaSSR Goskomsel'khoztekhnika [State Committee of the Agricultural Equipment Association] to insure a high degree of efficiency of all agricultural equipment during the feed procurement period. All other suppliers are obliged to deliver to the farms all necessary materials and petroleum products for successful procurement of the feeds within specified deadlines.

The ministries, departments and executive committees of the Soviets of Peoples' Deputies, it is noted in the decree, should establish strict control over the use and storage of fuel and lubricants and adopt measures for their efficient consumption.

The decree calls for supplementary payments to all participants in the feed procurement when the planned volumes of work and high quality feeds are obtained, and calls for incentive payments to the winners of socialist competitions.

A series of other measures necessary for successful procurement of high-quality feeds is also called for by the decree.

Haycutting Progress Outlined

Moscow TRUD in Russian 16 Jun 81 p 1

[Article by Ya. Ayzpurvs, deputy minister of Agriculture, LaSSR, Riga]

> [Text] For workers in the village, a busy and responsible time--large-scale hay mowing--is here. Both the quality and the amount of feeds depends on the precise organization and performance of the entire complex of feed harvesting operations, from harvesting to putting it in storage. The nutritive and full-valued rations during the winter will permit us to increase production of meat and milk and other farm products. Therefore it is now very important to apply all of our efforts so that a sound feed base, a reliable store of forage for cattle from the public sector is created on each farm.
>
> Hay mowing is in full swing in Latvia. It still remains to procure 531,000 tons of hay, 204,000 tons of chopped straw, more than a million tons of haylage and the same amount of silage. How are the republic's farmers resolving these problems; what must be undertaken to create a solid reserve of full-valued feeds?

Compared with last year, the farmers of Latvia must increase the volumes of feed procurement by 60 percent. There now exist good prerequisites for this. The grasses have grown thick and tall. If the first harvesting is completed in June, it is possible to count on a second mowing. This is the chief goal of the feed procurers.

In the Bauskiy rayon, the sovkhov "Progress" is one of the first points for commencement of grass mowing and the production of grass meal. Here the grass has already been cut from a significant area. Two units are working precisely on the production of grass meal. The sovkhoz obligated itself to produce 2,000 tons of this most valuable feed, and only in pellets and briquets, forms which will preserve the nutritive properties. Other farms of the region, the sovkhoz imeni "50-Letiya SSSR" and the kolkhoz "Uzvara," are also producing successfully.

Hay mowing on the sovkhozes "Vetsautse" and "Berze," Dobel'skiy rayon is proceeding full speed ahead. On the kolkhoz "Tervete," every kolkhoz worker not engaged in weeding the root crops took a pledge to produce 2 tons of hay for public sector livestock raising.

This season, the rains come often enough. Under such conditions it is necessary to change production methods more efficiently. When one cannot cut hay, shift to production of grass meal or cut straw and silage. The most important thing is for the feed processing conveyor to be in continuous operation.

The republic's farms are now well supplied with units for preparation of vitamin meal. It is necessary to use them at full strength, as it is done, for example, on the kolkhoz "Kekava," Rizhskiy rayon. Here a complex production unit headed by Roland Siga works precisely. Two units operate continuously and produce more than 30 tons of grass meal per shift.

The obligation of specialists and equipment operators is to supply the highly productive operation of equipment, hay harvesters and machinery.

Unfortunately, matters are not well on all farms. For example, on the kolkhozes and sovkhozes of Rezeknenskiy rayon, as yet less than half of the units are in operation, while in the Tsesisskiy rayon, only two-thirds are working.

Now urgent measures are being taken to improve the situation. The trade union organizations at the sites are inspecting the course of the feed procurement and are organizing competitions for high tempos and high work quality. They are making all efforts so that the equipment is used with maximum output.

Lagging Procurement Scored

Moscow TRUD in Russian 7 Jul 81 p 1

[Article by I. Rumova, TRUD correspondent, Riga]

[Text] The farmers of Latvia have begun feed procurement significantly earlier than in previous years. But recently the tempos of the green harvest have dropped off noticeably. In part, it is the weather--it rains every day. But in those places where they cannot count on the sun, they skillfully maneuver the equipment; their large capacities are filled and affairs move along, even in bad weather.

The Rezeknenskoye regional agroindustrial association is well supplied with highly productive machinery. They are using this equipment on the sovkhoz "Berzgale" with a full yield. Here a mechanized unit headed by Ya. Babris prepared almost 600 tons of haylage, more than half of the annual quota. The kolkhoz "30 Let Oktyabrya" occupies one of the first places in the association for hay preparation. The uninterrupted operation of hay mowers and bailing-and-pick-up units and other implements is insured by precision service-and-supply servicing. But there is another picture at other farms of the same Rezeknenskoye regional association. On the kolkhoz "Audrini" and the sovkhoz "Dritseny," the harvesters are scarcely used at half their capabilities. On the sovkhoz "Gaylumi," half of the hay fields are not cut, even though there are 20 tractor-drawn hay mowers.

On many farms, the units are standing idle due to lack of organization, low level of labor discipline, the absence of necessary inspection and repair. But miscalculations by Goskomsel'khoztekhnika [State Committee of the Agricultural Equipment Association] are also having an effect. For example, there are neither rakes nor spare parts for trailers nor many other extremely necessary parts. All of this is delaying the tempo of feed procurement.

9194
CSO: 1824/364

UKRAINIAN CP CC PLENUM REVIEWS PROGRESS IN DEVELOPING STOCKRAISING

Moscow SEL'SKAYA ZHIZN' in Russian 23 Jul 81 p 2

[Article by S. Luzgan: "Farm Reserves -- Into Play"]

[Text] As is known, the comprehensive development of agriculture was made the basis of the food program being developed on instructions from the 26th CPSU Congress, which program will unify the entire agroindustrial complex. And it means foremost growth in the production of meat, milk and other stockraising output. Stockraising has been declared the shock-work front of the countryside.

What is the present status of this vitally important branch in the Ukraine? What steps must be taken to continue its steady development? This was discussed objectively and thoroughly at a plenum of the Ukrainian Communist Party Central Committee.

It was noted that 17.5 billion rubles, or 38 percent of all allocations for agriculture in the republic, has been invested in this branch, including feed production, over the last 10 years. During that time, many farms and complexes and many feed production facilities have been built or renovated. The number of head has been increased and the composition of purebred livestock and poultry has been improved. The level of cattle farm comprehensive mechanization has been increased to 50 percent, that of hog farms to 64 percent and that of poultry farms to 83 percent. All this has had a positive impact on branch development. During the past five-year period, meat production on republic kolkhozes and sovkhozes increased 40 percent as compared with 1966-1970, milk -- 37 percent and eggs -- 2.9-fold. Purchases of this output increased and quality has improved.

At the same time, speaker I. A. Mozgovoy, Ukrainian Communist Party Central Committee secretary, and those participating in the debates, Donetskaya obkom first secretary B. V. Kachura, Dnepropetrovskaya obkom first secretary Ye. V. Kachalovskiy, Odesskaya obkom first secretary N. K. Kirichenko, Ukrainian SSR Minister of Agriculture M. V. Khorunzhiy and others, while noting what has been achieved, focused their primary attention on existing shortcomings and oversights, bottlenecks and unsolved problems, on those enormous tasks which must be resolved.

The present level of republic stockraising development, and foremost meat and milk, does not fully meet the growing requirements of the population. In a number of oblasts, stockraising output is increasingly slowly and insufficient use is being made of opportunities for intensive development of the branch. Moreover, the rates of stockraising production have decreased in the 10th Five-Year Plan. A majority of

the oblasts and the republic as a whole have not met the five-year plan for sales to the state. Of 25 oblasts, only eight coped with overall assignments for procurement of all types of output -- Zakarpatskaya, Ivano-Frankovskaya, Kiyevskaya, Krymskaya, L'vovskaya, Rovnenskaya, Chernigovskaya and Chernovitskaya. And a number of oblasts have lower meat purchases this five-year period than the preceding one -- Nikolayevskaya, Kirovogradskaya and Sumskaya. Many republic farms have relinquished the positions achieved in meat purchases as well.

The plenum especially stressed that it would be improper and even incorrect to explain this inadequate level of branch development by the weather alone. The lag is foremost a consequence of serious oversights in the work of agricultural agencies, of many kolkhoz and sovkhoz leaders and specialists, of inadequate supervision of their activity by a number of party obkoms and raykoms. By no means everything possible has been done to create a solid feed base. A number of important questions in breeding have not been resolved, animal husbandry has not been properly organized on many farms, and the achievements of science and leading practice are being introduced slowly. These shortcomings are intolerable in light of the new tasks, as was noted at the plenum.

Slaughter-weight meat production must be brought up to 3.9-4.1 million tons in the republic in this five-year plan and milk production -- to 22.5-23 million tons, or increases of 13-18 and 4-6 percent, respectively, as compared with the levels reached in the 10th Five-Year Plan. In order to reach these frontiers, we must average milk yields of 3,000 kg per cow in the republic through intensive factors; in regions of well-developed dairy stockraising -- 4,000 to 5,000 kg. We are faced with increasing average daily cattle weight gain at feed lots to 600-700 grams and for hogs -- to 400 grams.

Comprehensive dairy stockraising and hog raising development programs have been worked out in the republic. We are finishing work on a program to increase beef production, a comprehensive feed production plan and the "Feed Protein" target program. Plenum participants made a suggestion that similar comprehensive programs be worked out quickly for each oblast and rayon, on each kolkhoz and sovkhoz, and, most importantly, that their implementation be made the center of our attention and be under unremitting supervision.

The plenum referred to the necessity of widely disseminating the initiative of rural Cherkasskaya Oblast laborers, who initiated competition for fulfillment ahead of schedule of five-year plan assignments on the production and procurement of stockraising output. Cherkasskaya Obkom First Secretary I. K. Lutak reported that oblast laborers are honoring their pledge to the homeland. The first half-year assignment for procurements of meat, milk and other stockraising output has been overfulfilled. The basis of this success has been a comprehensive approach to stockraising development.

Much attention was paid to the planned development of feed production, a pivotal branch problem, at the plenum. Incidentally, the examples of model work organization in main stockraising shops taught a serious lesson to those who like to cover up their incomplete work and shortcomings by citing objective reasons. On "Ploskovskiy" Sovkhoz in Kiev Oblast, the average annual milk yield per cow has reached 5,500 tons. The basis of this success has been a solid feed base. They get 63 quintals of fodder units per hectare here, which is 44 quintals per reference head of cattle. In Cherkasskiy Rayon, Cherkasskaya Oblast, they produced an average of 58.5

quintals of fodder units per hectare this past five-year plan. Recalculated per 100 hectares, they obtained averages of 179 and 629 q/100 ha, respectively. The rayon has met assignments for sales of these products each year.

Pervomayskiy Raykom (Khar'kovskaya Oblast) First Secretary I. F. Kalantay, kolkhoz imeni Budennyy (Mironovskiy Rayon, Kiev Oblast) chairman Ye. V. Dragonenko and kolkhoz imeni Michurin (Korostyshevskiy Rayon, Zhitomirskaya Oblast) milkmaid N. P. Negerey revealed opportunities for sharply reducing grain expenditures for feed by using more succulent fodder, mixed-feed silage, multicomponent mixtures, food scraps and other concentrate substitutes not now being used. They demanded faster solution of the problem of arming farmers with modern feed-procurement equipment which will permit reducing forage crop harvesting time and improved feed quality. G. A. Bogdanov, chairman of the Southern Division of the VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin], Khersonskaya Obkom First Secretary A. N. Girenko and other plenum participants spoke of the necessity of making more extensive use of the latest achievements of science in organizing full-ration, balanced feeding of livestock using minimum feed concentrates, of deriving as fast as possible fast-maturing varieties and hybrids of corn, the main grain-forage crop.

A number of oblasts were criticized at the plenum for serious shortcomings in the organization of feed production. For example, farms of Ternopol'skaya Oblast not only failed to increase succulent and coarse feed procurement this past five-year plan as compared with the previous one, but even decreased it, and did not concern themselves with feed quality. A similar situation developed in Khmel'nitskaya, Kirovogradskaya, Nikolayevskaya, Sumskaya and certain other oblasts, which retarded stockraising development.

Feed procurement in the republic is now better organized. By the end of the second 10-day period of July, two-fold more hay had been laid up than last year. Nine oblasts had already met the plan for procurements of this valuable type of feed. The republic has now decided to lay up at least a ton of silage and grass cuttings, 4-5 tons of root, vegetable and cucurbits feed and 10 tons of haylage and silage per cow and 2-3 tons of mixed silage per sow.

The reference was not only to creating a solid feed base balanced in nutrients, but also to reducing expenditures of grain as feed. To do this, as plenum participants noted, we need first of all to improve everywhere the sown-area structure with a view towards expanding the area sown to grain-forage crops, perennial grasses, multicomponent mixtures (mixed greens for feed) and fodder beets. The areas sown to soybeans and other high-protein crops in the republic have thus far been expanded very slowly. We are faced with sharply increasing the productiveness of natural meadows and pastures. Many farms are harvesting only 10-15 quintals of hay. The work volume for improving meadows and pastures is not being carried out, year after year.

Irrigated and drained land occupies 11 percent of all arable agricultural land in the republic and yields a fifth of all its feed. However, analysis shows that its productive potential is far from being fully used. Plenum participants spoke of planning defects. Fifteen percent or more of the expensive irrigated land is occupied by low-productivity crops; only eight percent is planted to soybeans and corn. In a number of oblasts, only 13-15 percent of the arable irrigated land is planted to alfalfa, instead of the 25-30 percent outlined in the crop rotations. At least one-fifth of the irrigated land can be planted to more than one crop per year, but last

year only nine percent was used this way. Moreover, low fodder crop yields are obtained on reclaimed land in Zaporozhskaya, Dnepropetrovskaya, Volynskaya and several other oblasts.

It is apparently time to be more concerned than ever in the Ukraine about the quality of the feed procured and about reducing losses in storage. The effort to procure not only more forage, but also better-quality forage, was roundly supported at the plenum. However, its participants noted that the republic has only 57 percent of the major storage facilities it requires, and less than 50 percent in a number of oblasts. The task is to create such storage facilities for the entire harvest in the near future.

In this connection, the statements by many plenum participants that we need to ensure the fastest possible start-up of new mixed-feed industry capacities deserve special attention. It was noted that the Ministry of Procurement and Ministry of Agriculture in the republic have failed to carry out plans established for releasing such facilities for operation this past five-year plan and are currently doing poorly in utilizing the allocations being made for these purposes.

Plenum participants discussed in detail the problems of further developing farm shops at industrial enterprises, private subsidiary plots and breeding work, large-scale selection, and the specialization and concentration of stockraising. Much attention was paid to the role of socialist competition in the struggle for successful fulfillment of the plans and obligations of the current year and the five-year plan as a whole.

V. V. Shcherbitskiy, First Secretary of the Ukrainian Communist Party Central Committee and CPSU Central Committee Politburo member, gave a speech at the plenum.

A detailed resolution was adopted on the question discussed. It defined the tasks and ways of further developing public stockraising in the republic.

11052
CSO: 1824/391

REGIONAL DEVELOPMENT

DECREASE IN IRRIGATION WATER LOSSES IN TURKMENISTAN URGED

Ashkhabad SEL'SKOYE KHOZYAYSTVO TURKMENISTANA in Russian No 6, Jun 81 pp 20-21

/Article by A. Ovezov, chief engineer of the Administration of Exploitation of the Turkmen SSR Ministry of Land Reclamation and Water Resources: "Irrigation Water Losses Must Be Reduced"/

/Text/ The Turkmen Republic, which has a vast reserve of fertile land and favorable natural and climatic conditions for the cultivation of the most valuable types of agricultural crops, is poor in water resources. The Amudar'ya, Murgab and Tedzhen rivers, of which only the first is deep, are the main water sources.

Farming based on these water sources on the republic's territory was carried out even in remote antiquity. However, the "big water," which had remained the people's impossible dream from time immemorial, became a reality only after the Great October Socialist Revolution.

A vast program of irrigation reforms aimed at the development of irrigated farming began to be implemented in our republic from the first days of Soviet rule. Despite the great difficulties in the formation of the Soviet State the irrigated area in the Turkmen SSR increased from 250,000 hectares in 1925 to 942,000 hectares in 1980.

Reclamation construction in the republic especially gained in scope during the years following the March (1965) Plenum of the CPSU Central Committee, which initiated an overall performance of work on the development of new and increase in the efficiency of utilization of old irrigated land. During the past 15 years alone (1966-1980) the area of irrigated land in the republic increased 1.8-fold, that is, from 522,000 hectares to 942,000 hectares. During the same years the volume of water intake for irrigation throughout the republic increased from 10,294 million cubic meters to 20,894 million cubic meters and, at the same time, the available water supply for areas sown with agricultural crops increased considerably. Whereas in 1965 the actual water intake per hectare of irrigated land totaled 19,720 cubic meters, in 1980 it was increased to 22,180 cubic meters.

The volume of water intake and of the available water supply for irrigated land was increased as a result of the greater carrying capacity of all the sections of the Karakum Canal imeni V. I. Lenin, expansion of the regulating capacity of reservoirs and reconstruction of old irrigation systems with a rise in their efficiency.

Special attention was paid to an improvement in the reclamation state of new and old irrigated land. A large network of collector drainage and catch canals was built. In 1980 the total length of the collector drainage network throughout the republic was 20,238 km (as compared to 4,680 km in 1965), which made it possible to drain and divert 4,938 million cubic meters of drainage water and 28,665,000 tons of salt harmful for plants beyond the irrigated territory.

This work was one of the main conditions for an increase in the efficiency of utilization of irrigated land, that is, it ensured the production of rich harvests of agricultural crops, including of the leading crop--cotton. Whereas in 1965 the yield of cotton throughout the republic averaged 21.4 quintals per hectare, in 1980 a total of 24.8 quintals of raw cotton per hectare was obtained. A record cotton harvest--1,258 million tons--as compared to 553,000 tons in 1965 was gathered last year.

The fate of the harvest in the republic largely depends on the degree of availability of water supply for crops: If there is water, there is a harvest. Therefore, the party and the government right now are solving the problem of transferring part of the flow of Siberian rivers to Central Asia, including to our republic.

In order to meet the need for water more quickly, in the republic right now it is necessary to raise the technical level of the reclamation network and to more fully utilize all the available water resources. This task should be accomplished not only in the interfarm, but, most importantly, intrafarm network, because a significant part of the water obtained by kolkhozes and sovkhozes without benefit is lost in farm canals and fields.

At present the efficiency of intrafarm canals in the republic does not exceed 0.75 to 0.80. This means that 20 to 25 percent of the water supplied to farm canals is lost owing to evaporation and filtration without reaching fields.

An increase in the values of efficiency of intrafarm canals to at least 0.90 would make it possible to expand the sown areas by 10 to 15 percent, which, at the same time, would reduce ground water increment considerably.

How much water is lost on evaporation and filtration on fields?

According to the data of scientific research institutions only 65 to 75 percent of all the water supplied to fields during irrigation by the surface method is utilized by agricultural crops and the remaining part of 25 to 35 percent is used for ground water recharge and evaporation.

The potentials of water resources now lie in these factors and their utilization in a full volume is possible by a regular rise in the technical level and organization of the service of operation of systems of canals and installations on the basis of the latest achievements of science and advanced technology and a strict observance of water use rules. It is necessary to shorten the length of canals to a minimum and to ensure their prompt brush and sediment clearance. At the same time, it is necessary to strictly adhere to the planned sizes of canals, because their excessive expansion, as compared to the necessary sizes, also leads to an increase in water losses and to their rapid silting.

All the measures directed toward the technical servicing of farm canals and installations should be implemented strictly according to planning estimates and with the technical assistance of water management organizations. With such a formulation of the problem it is possible to obtain a high effect from the work done on a decrease in the losses of water from irrigation canals.

Water saving can be attained as a result of a correct water distribution through canals by the introduction of brigade water rotation, ensuring a full carrying capacity of individual canals, and by a universal and full use of irrigation tools, that is, flexible hoses, siphons, pipes and even paper napkins.

On many farms the technical servicing and operation of the intrafarm irrigation and collector drainage network are carried out on a high level and in a planned manner. The efficiency of systems and of irrigation water regularly increase on these farms. The hydraulic engineering specialists of farms direct these operations.

At the same time, in the republic there are still many farms where such work is of an arbitrary nature, irrigation is carried out at the discretion of irrigators, frequent overirrigation and discharge of water to waste land occur and so forth.

An inferior execution of preparatory work, that is, leveling, layout of irrigation maps, cutting of temporary irrigating canals and so forth, is the reason for the low efficiency of utilization of irrigation water on some farms. The existence of some shortcomings on farms is due to the lack of hydraulic engineering specialists on them and to the irresponsible attitude of managers toward these important problems of irrigated farming. For example, in 1980 a total of 24 out of the 428 people fined by the Inspectorate for the Utilization and Protection of Water Resources of the Turkmen SSR Ministry of Land Reclamation and Water Resources for a violation of water use rules were farm managers and 201, brigade leaders.

A low yield of agricultural crops and a disruption in the set assignments for their production are the results of such an attitude toward work. Therefore, it is necessary to urgently rectify the state of affairs in the localities.

All the measures implemented in the reclamation network, as well as the work connected with a careful utilization of irrigation water, should be implemented on a high level and ensure a decrease in irrigation water losses and the production of a rich harvest of agricultural crops.

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CSO: 1824/393

UDC 631.15

FACTORS INFLUENCING SUCCESS, FAILURE OF USSR FOOD PROGRAM

Moscow IZVESTIYA TIMIRYAZEVSKOY SEL'SKOKHOZYAYSTVENNOY AKADEMII in Russian No 4, Jul-Aug 81 pp 156-166

[Article by V.A. Dobrynin, Department of Economics of Socialist Agriculture: "Social-Economic Aspects of the USSR Food Program"]

[Text] In the Summary Report to the 26th CPSU Congress, L.I. Brezhnev pointed out that raising the standard of living of workers pushes into the foreground the task of improving the supply to the population of food and industrial consumer goods. "For the purpose of achieving a radical solution for this problem" he stated, "the development of a special food program is deemed necessary." Here we have in mind a program which combines the problems concerned with the development of agriculture and the industrial branches which serve it, procurements, storage and the transporting and processing of agricultural products and also the problems of developing the food industry and the food goods trade.

Thus the development of the program encompasses a broad range of problems which are associated with the development of the country's agroindustrial complex and particularly agricultural production.

The party and government have always devoted serious attention to the problem of supplying the population with food goods. At the dawn of Soviet rule, when as a result of extended wars and economic ruin the food problem had become very acute throughout the country, V.I. Lenin stated that in the absence of agricultural improvements "...there is no salvation for us without such a base, any type of economic construction is impossible and however great the plans may be -- nothing will come of them"*.

Guided by the instructions of V.I. Lenin, the party carried out a tremendous amount of work in connection with supplying the country with agricultural products. During the years of Soviet rule, we created a large-scale and highly mechanized system of kolkhoz and sovkhoz production. At the present time, the output of the branch constitutes three fourths of the national consumption fund.

Agricultural development is inseparably aligned with increasing the volume of capital investments. During the 1918-1979 period, investments in this branch

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* V.I. Lenin. Complete Works, Vol. 42, p 148.

came to a tremendous total -- 455 billion rubles. It was precisely the systematic growth in such investments that ensured steady improvements in the production of agricultural products, the average annual volume of which increased (in comparable prices by 24 percent (see Table 1) during the past three five-year plans (1966-1979). It is interesting to note that this growth took place during a considerable reduction in the rural population. During the period mentioned, it decreased by 7.4 million people.

TABLE 1

Average Annual Volume and Rates of Growth in Gross Agricultural Output During 1966-1979 Period (all categories of farms, in comparable prices of 1973) [9]

Indicators	1966-1970	1971-1975	1976-1979	1971-1975	1976-1979
	Billions of Rubles			In % of 1966-1970	
Gross output					
Total	100.4	113.7	124.2	113	124
Including farming	47.6	51.7	57.2	109	120
Animal husbandry	52.8	62.0	67.0	117	127

During the years mentioned, a considerable increase took place in the cropping power of the agricultural crops (see Table 2).

TABLE 2

Dynamics of Cropping Power of Principal Agricultural Crops During 1951-1979 [sic] Period (all categories of farms) average annual quintals per hectare [8, 11]

Crops	1961-1965	1966-1970	1971-1975	1976-1979
Grains	10.2	13.7	14.7	16.3
Sugar beets	165.0	228.0	217.0	242.0
Sunflowers	11.2	13.2	13.2	12.1
Raw cotton	20.6	24.1	27.3	28.8
Potatoes	94.0	115.0	113.0	123.0
Vegetables	116.0	132.0	138.0	154.0

Despite the unfavorable weather conditions experienced during the Tenth Five-Year Plan, the country's powerful economic potential ensured an increase in the production of agricultural goods. For the very first time, the average annual gross yield of grain for a five-year period exceeded 200 million tons. Increases took place in the production of meat, milk, eggs, cotton and other products. During the Tenth Five-Year Plan, the overall volume of agricultural output exceeded the level achieved during the Ninth Five-Year Plan by 50 billion rubles*.

The increase in output surpassed the rates of growth for the population, as a result of which the per capita consumption of products increased (see Tables 3 and 4).

* Speech by Comrade L.I. Brezhnev during CC CPSU Plenum on 21 October 1980. PRAVDA, 22 October 1980.

Nevertheless, despite the increase that has taken place in the production of the principal food products, the requirements for such products are still not being satisfied fully. An analysis of the structure of the food ration reveals that it is completely satisfactory in terms of its caloric content. The country's average per capita consumption of calories is 3,000. During the last three five-year plans, the level of meat consumption increased by 41.5 percent, milk and dairy products -- by 27.1, eggs -- by 87.9, sugar -- by 25.1 and vegetables, fruit and berries -- by more than 30 percent. At the same time, reductions were recorded in the consumption of potatoes and grain products. This testifies to the considerable qualitative changes that took place in the rations and to the improvements realized in the food of workers. However, in terms of their structure, the rations are not meeting the norms established by the medical science. A deficit of protein of animal origin is being observed in these rations. The requirements of the population for meat and dairy products and eggs are still being satisfied to only 70-80 percent. The rations are also marked by a lack of fruit, berries, vegetables, melon, fish and fish products.

TABLE 3

Dynamics of Average Annual Per Capita Production of Agricultural Products in the USSR (according to materials in [8 and 9])

Products	1966-1970	1976-1979	1977-1979 in % of 1966-1970
	Kilograms		
Grain	707	807	114
Cotton	26	33	127
Sugar beets	342	350	102
Sunflowers	27	21	78
Flax fibre	2	1.6	80
Potatoes	400	334	84
Vegetables	82	101	123
Meat	49	57	116
Milk	340	360	106
Eggs, units	151	239	158
Wool	1.6	1.7	106.2

During the years of the Tenth Five-Year Plan, the per capita consumption level for the principal food products changed very little. This was associated mainly with the fact that in recent years a noticeable reduction has taken place in the rates of increase in the production of agricultural products. Compared to the Ninth Five-Year Plan when the annual increase in gross output (for all categories of farms) was 2.6 percent, during the period from 1975 to 1979 it equalled 2.2 percent. The rate of increase for meat production dropped from 4.1 to 2.9 percent, milk -- from 3.4 to 1.3 percent. Meanwhile, during this same period the annual increase in industrial output was 5 percent, including 5.3 percent for Group A and approximately 4.3 percent for Group B. In the branches of light industry, it equalled 4.5 percent and in the food industry, which operates mainly on the basis of agricultural raw materials -- 2.2 percent (according to materials in [9]).

TABLE 4

Consumption of Principal Food Products (in kg, per capita annually) [13]

Products	1913	1965	1970	1975	1979
Meat and meat products in a conversion for meat	29	41	48	57	58
Milk and dairy products in a conversion for milk	154	251	307	316	319
Eggs, units	48	124	159	216	233
Fish and fish products	6.7	12.6	15.4	16.8	16.4
Sugar	8.1	34.2	38.8	40.9	42.8
Vegetable oil	-	7.1	6.8	7.6	8.4
Potatoes	114	142	130	120	119
Vegetables and melons	40	72	82	89	95
Fruit and berries	11	28	35	39	38
Grain products in a conversion for flour	200	156	149	141	139

Low rates of increase in agricultural output cause disproportions in the operation of the agroindustrial complex and they retard the development of those branches which operate on the basis of agricultural raw materials.

The deceleration in the rate of growth for agricultural output and, it follows, in the rates of growth for food products was accompanied during the past decade by sharp increases in the requirements of the population for high quality food and clothing* and this to a considerable degree was the result of increased wages for the kolkhoz and sovkhoz workers and for many categories of industrial manual and office workers. From 1970 to 1979 the average rates of growth in average monthly wages in the national economy amounted to 3.8 percent, whereas the rate of increase for gross agricultural output equalled 1.3 percent, that is, wages increased three times more rapidly than did agricultural output. The ability of the population to pay for goods is underscored by the fact that during this period the deposits made to savings banks increased from 46.6 to 146.2 billion rubles [15].

One of the main causes of the deceleration in the rates of production of agricultural output was the severe weather conditions which hampered the cultivation and harvesting of the crops during 1972, 1975, 1977, 1979 and 1980. History reveals that in czarist Russia similar phenomena led to severe social disturbances and to starvation in a large number of provinces.

Unfavorable weather conditions in the capitalist countries brought about a considerable deterioration in the status of the workers. The concealed food crisis of 1972 assumed an overt form. On the international market, there was a clear trend towards raised prices for food products. By the beginning of 1979, the prices had increased by a factor of 2.5 above those for 1970. Food goods also became considerably more expensive on the internal markets of capitalist and developing

* Data is available indicating that the requirements of people double every 14-15 years, that is, they increase by more than 6 percent annually. "Ekonomicheskiye problemy povysheniya effektivnosti sel'skokhozyaystvennogo proizvodstva" [Economic Problems on Raising the Efficiency of Agricultural Production], Moscow, Mysl', 1978, p 34.

countries and this led to great deprivations for the poor sections of the population. The cyclical slumps in the production of fertilizers and petroleum resulted in physical shortages of these products and, it follows, raised prices for them. This in turn necessarily had to affect the production volumes for food goods. All of these factors tended to increase the army of starving individuals. Of 97 developing countries, food shortages were noted in 61 of them. Two thirds of the world's population presently lives in countries where the production of food goods is increasing at a slower rate than the demand for such goods.

A judgment can be made concerning the degree to which the world's population is supplied with food products by referring to the data furnished in Table 5, which underscores the low level of food supply for the population, especially with regard to products of animal origin. And this is at a time when our planet has great potential opportunities at its disposal for increasing the production of food goods. Throughout the world there are still many millions of hectares of land which are suitable for agriculture but are not being employed for this purpose (especially in Latin America and Africa). According to materials supplied by the FAO [Food and Agriculture Organization], of 3.19 billion hectares considered to be potentially suitable for farming, only 1.1-1.4 billion hectares are being employed in agriculture and of this latter amount approximately only 700 million hectares are being used for the growing of crops. Taking into account the frequency of annual rotations, 3.19 billion hectares are the equivalent of 6.6 billion hectares and this is greater than the area presently occupied by crops by a factor of 10.

TABLE 5

World Food Resources (kilograms per year, on the average for one inhabitant of the planet) [22]

Groups of Products	1965	1970	1975	1980
Grain, total	127.5	128.3	130.0	131.4
Root crops	77.5	75.8	74.5	72.9
Sugar (including syrup)	20.9	22.2	23.4	24.9
Vegetables	58.2	60.7	63.5	66.3
Fruit, total	35.7	39.2	40.2	45.4
Meat, total	27.1	29.1	30.9	33.0
Eggs, units	94.0	100.0	104.0	110.0
Whole milk	50.2	49.3	49.7	50.6
Animal oil	1.5	1.4	1.4	1.4
Vegetable oil	5.3	5.6	6.0	6.4

The advantages of the socialist system of farming in our country have made it possible, notwithstanding the extremely unfavorable weather conditions experienced over a number of years, not only to ensure the reproduction of agricultural output but to expand it and to supply the population of all republics and rayons throughout the country with products in a stable and uniform manner.

During the past 10 years, agriculture has been supplied with millions of tons of fertilizers (the deliveries per hectare of arable land have increased by 70 percent). A large volume of land reclamation work has been carried out. The level of technical

equipping of agricultural production has been raised considerably. Over the past decade the machine-tractor pool of the kolkhozes and sovkhozes has been renewed almost completely. Mechanized farms and complexes are being built throughout the entire country and existing farms are being modernized. All of these factors, in addition to promoting improvements in the cropping power of the agricultural crops and ensuring stable productivity for animal husbandry, have also made it possible to improve considerably the social living conditions of the rural workers.

However the growth in the requirements of the population for food goods and the light and food industry for agricultural raw materials is imposing greater demands upon agriculture and it is underscoring the need for increasing the production and improving the quality of the products. Analysis reveals that many methods and reserves are available for achieving this increase.

One feature of modern agricultural production is the fact that it no longer is a function of agriculture alone but rather it has become the task of many branches. An agroindustrial complex has been formed within the country which encompasses a vast sphere of the economy. The output of the complex constitutes roughly 40 percent of the gross output of the national economy. The APK [agroindustrial complex] accounts for approximately one third of all of the country's fixed capital and approximately 40 percent of all workers [19].

The successful and harmonious operation of the complex is dependent upon many factors, but primarily upon the level and distribution of capital investments. During the tenth five-year period, the volume of investments employed for developing the APK amounted to 210 billion rubles [19], of which amount 170 billion rubles were allocated directly to agriculture and approximately 30 billion for the construction, modernization and re-equipping of enterprises in the complex's 1st sphere, the sphere engaged in producing the means of production for agriculture. Approximately 80 billion rubles were assigned for the technical re-equipping of the branch, including more than 40 billion rubles for agricultural equipment and more than 32 billion rubles for the construction and equipping of animal husbandry facilities. A tremendous amount of funds was allocated for land reclamation work -- 31.8 billion rubles [9].

The effectiveness of use of these funds in agricultural production is dependent to a considerable degree upon the operational level of related branches. Unfortunately, it must be confessed that the planning-design and production base for the branches of agricultural machine building turned out to be unprepared for meeting the modern requirements of agriculture. A number of machines lack the required operational qualities and durability. Nor is the required assortment of equipment being supplied in all instances. Of the 3,000 different types of technical equipment included in the system of machines employed for carrying out agricultural work, series production has been organized for just slightly more than 1,800 types [3]. The mastering of new and efficient models of machines and production lines is proceeding extremely slowly.

In particular, many shortcomings have been observed in the use of resources for the construction of animal husbandry facilities. The absence of adequate technical-economic justifications has led to unjustified increases in the cost of construction projects. During the 1965-1979 period, the estimated costs for such projects

increased by more than twofold, including for large-horned cattle farms -- by a factor of 2.3 and for swine farms -- by a factor of 4.5 [21]. The increase in construction costs is explained not only by objective factors but also by outright waste. Very heavy materials are quite often used in construction work and this complicates power engineering unjustifiably. Moreover, the projects are often supplied with cumbersome equipment. The lion's share of expenses for the construction of farms and complexes goes for construction-installation work -- 82-84 percent. At some new animal husbandry complexes, up to 8 cubic meters of concrete are being expended per cow and up to 400 kilograms of metal per calf*. At times, a cattle billet costs as much as a good single room cooperative apartment.

At the same time, relatively small sums are being allocated for developing the logistics base for feed production at such expensive complexes -- in all, from two to three percent of the overall volume of capital investments [4]. The absence of a strong feed base and also of a prepared and highly productive herd leads to a situation wherein newly built complexes are unable to achieve their planned indicators for a considerable period of time. During the 1971-1978 period, two thirds of the animal husbandry complexes placed in operation failed to master their planned capabilities for the production of goods.

However, it would be a great mistake to view all complexes as being unprofitable or to consider the expenditures for them to be nothing more than a diversion of funds from other measures for increasing the production of agricultural products. For example, labor productivity and profitability are considerably higher at swine raising complexes than they are at kolkhoz and sovkhoz farms. At the present time, 30 percent of the pork is being produced at such complexes. The situation is the same for complexes engaged in the production of beef. On the average, complexes for the production of milk operate at a loss, since they are for the most part hampered by the mentioned shortcomings.

In discussing the negative aspects in the use of allocated funds, mention must necessarily be made of the problems of land reclamation. The role it plays in raising the productivity of farming is well known. If a proper attitude is displayed towards the resources invested, a great increase in output can be realized here. But a considerable part of the land reclamation work is being carried out also in the absence of adequate technical-economic computations and with considerable overexpenditures of resources. During the 1976-1980 period, the specific capital investments per unit of space increased by 61 percent over the figure for 1975. Quite often the volumes of drainage and irrigation reclamation work are planned without taking into account the opportunities available for cultivating the reclaimed lands and this lowers the effectiveness of their use.

Of the overall sum of capital investments in land reclamation, only 10 percent of the funds are being allocated at the present time for mastering drained lands. No less than 20 percent of these funds must be made available if the yields which these lands are capable of furnishing are to be obtained [21]. Very little return is being realized from improved lands in the nonchernozem zone of the RSFSR. At the present time there are approximately 2.5 million hectares of drained land and in

* L.I. Brezhnev. "On Further Development of USSR Agriculture." Report delivered before the Plenum of the CC CPSU on 3 July 1978. KOMMUNIST, 1978, No 10, p 38.

excess of 600,000 hectares of irrigated land in this region. They occupy seven percent of the agricultural land, but furnish only 12 percent of the gross output [1]. The organizations of the RSFSR Ministry of Land Reclamation and Water Economy are both clients and executive agents for the work, they display concern mainly for utilizing the capital investments and they do not bear proper responsibility for the final product. Beyond any doubt, the work of these organizations should be evaluated according to the final result -- cropping power, in accordance with the degree to which the quality of the reclaimed lands meets the requirements for highly intensive agricultural production and environmental protection. Towards this end, it is obvious that certain organizational changes are required in the work of the interested ministries.

The strengthening of the logistical base of agriculture and particularly its industrialization is not limited to the mere economic strengthening of the kolkhozes and sovkhozes. Rather, it is a means for solving many social problems. Mechanization and the use of chemical processes in agriculture, by alleviating heavy agricultural labor and making it more productive, are strengthening the culture of production, raising the interest of the producers in the work being carried out, eliminating the undesirable migration processes, promoting the retention of skilled personnel and, most importantly, bringing about a large increase in additional output.

Despite the comparatively broad front of construction and modernization work and also the great flow of machines and equipment into agriculture, the level of support for the branch in terms of fixed productive capital is still low and amounts to approximately 70 percent of the norm. The capital-labor ratio here is presently lower by a factor of 1.5 and the power-worker ratio -- lower by a factor of almost six, than the figures for industry.

Agricultural production is being adversely affected by an inadequate supply of tractors and soil cultivation and harvesting machines. As a result, the actual duration of agricultural operations exceeds the optimum figures by a factor of 2-3. In the grain economy, for example, owing to a shortage of machines, which precludes the possibility of carrying out the principal technological operations on schedule, there is an annual shortfall of approximately 35 million tons of grain. In the production of feed, this results in nutrient losses of up to 20-30 percent in the feed [5].

The required proportions are not being observed in the case of equipment deliveries for the fields. Thus, an increase in the number of powered vehicles is not being accompanied by corresponding growth in the number of working machines. The highly productive and powerful K-701 and T-150 tractors are only being supplied with 50-60 percent of the working machines required [23].

Animal husbandry, where labor intensiveness in production operations is very high, is suffering in particular from a shortage of fixed productive capital. At the beginning of 1980, 17 percent of the large-horned cattle, 10 percent of the swine and 23 percent of the sheep at sovkhozes alone throughout the country were being accommodated in facilities where mechanization is impossible. However, on standard farms and complexes it is completely impossible to realize the potential productivity of the livestock owing to a shortage of equipment and an incomplete

assortment of equipment. Thus, in the RSFSR, 23 percent of the newly built dairy complexes were not mechanized on a complex basis, swine raising farms -- 12 percent and large-horned cattle farms -- eight percent. Of the overall number of kolkhoz-sovkhoz farms, 39 percent are completely mechanized, for swine -- 61 percent and for poultry -- 69 percent [10]. Just as in the past, a very difficult task is that of supplying the farms and complexes with equipment for auxiliary operations, which account for 35-40 percent of the overall labor expenditures. A severe shortage of transport equipment is being experienced, especially specialized equipment -- livestock wagons, milk wagons and feed wagons.

Nor is it only the sphere of agricultural production that is experiencing a great need for fixed capital. The problem of eliminating the disproportions between the output production volumes and the logistical base for its storage and processing has become especially acute. During the 1966-1980 period, 53 billion rubles of capital investments were allocated to the APK for developing this sphere [3]. Nevertheless, the gap between the production volume for agricultural output and the capabilities for processing and storing it is closing very slowly. For example, in 1979 the kolkhozes and sovkhozes in the nonchernozem zone were provided with granaries for only 50 percent of their requirements, potato storehouses -- 35 percent and silage and haylage installations -- 30 percent. It has been estimated that it is possible to increase the consumption of products by 25-30 percent merely by improving the preservation of those products.

In carrying out the food program, great importance will be attached to further development of the highway and transport economy. Transport is one of the most important factors with regard to agricultural production. The delivery of agricultural products to the consumption sphere is dependent upon its availability and organization. Agriculture is distinghished by a high level of transport capability and a great variety of freight -- 250 types. At the kolkhozes and sovkhozes, an average of up to 500-700 ton-kilometers of freight turnover is carried out by all types of transport per hectare of arable land [7]. The main part of such shipments is carried out over poor roads. Because of the poor condition of the roads, the requirements for motor vehicles are increasing by a factor of 2-3 and losses and spoilage of agricultural products are being tolerated. A road is an extremely expensive means of production. One kilometer of road having a gravel surface costs 15,000 rubles and with an asphalt surface -- 60,000 rubles. However, each ruble invested in the installation of rural roads furnishes a return of roughly 4 rubles [20]. On hard surface roads, the load carrying capability of motor vehicles increases to 80 percent, speed -- by a factor of 2-3, fuel expenditures are cut in half and expenses for repairing the motor vehicles are reduced by several times. Hard surface roads promote efficient operations at enterprises, savings in material resources and growth in labor productivity. In addition, they represent an important social factor. At the beginning of 1980, the overall extent of such roads in the USSR was 770,000 kilometers [14]. Compared to 1970, it had increased by 50 percent. For every 1,000 hectares of agricultural land, we have roughly 1.2 kilometers of hard surface intra-farm roads, or five times less than the norm.

An improvement in the technical potential of agriculture is the main condition for growth in labor productivity. Owing to an inadequate level for the logistical base of agriculture, full use is not being made of the available means of production. As a result, the rates of growth for labor productivity are lagging considerably

behind the growth in the capital-labor ratio. During the past 10 years the value of the funds per individual worker increased by a factor of 2.3, while labor productivity increased by only 23 percent [12]. The technical modernization of agriculture, while alleviating agricultural labor substantially, still did not bring about a noticeable reduction in its expenditures. This is expressed economically in the fact that additional expenditures for equipment are being compensated to only a weak degree by a reduction in the wage fund. Attention should be directed to the fact that, owing to weak technical equipping, shortfalls in the crops, spoilage of the products and other problems are being tolerated. According to present estimates, it is for this reason that we are failing to obtain products valued at a minimum of 25-30 billion rubles [2]. All of these factors are delaying a reduction in production costs, improved profitability and, it follows, an expansion in output production. Owing to insufficient support in the form of equipment and a weakly developed infrastructure, USSR agriculture is not making full use of the great advantages offered by the large-scale socialist agricultural enterprises.

This is why further improvements in the branch objectively require an increase in capital investments for developing the entire agroindustrial complex and particularly its first sphere. It should be made quite clear that in the absence of large-scale additional investments for strengthening the logistical base, it will be impossible to achieve stable results and raise the efficiency of agriculture. This applies in particular to those vast regions of our country where unfavorable weather conditions occur frequently. The effect of the latter can be weakened only through the increased production of modern equipment and more extensive use of the achievements of scientific-technical progress. And, finally, additional capital investments are required for compensating for that portion of the able-bodied population that has departed agriculture. If the former rates of migration continue during the Eleventh Five-Year Plan, then no less than 5 billion additional rubles must be allocated merely for compensating for those workers who left the branch.

However, it would be wrong to rely only upon additional investments. The implementation of the food program is inseparably associated with making more rational use of each ruble made available for agricultural development. Our task consists of promoting a more rational use of land, material and labor resources and raising the productivity of plants and animals. Special attention must be given to the most important factors of agriculture -- the expanded reproduction of soil fertility and strengthening of the feed base. For these are the factors which provide the foundation for increasing the production of products. In this regard, problems concerned with the intensification of farming and particularly the grain economy assume greater importance.

As is known, during the Eleventh Five-Year Plan the average annual production of grain is to be increased to 238-243 million tons and by 1990 -- to 1 ton per capita. But the problem is not just simply increasing the gross yields of grain but rather achieving considerable improvements in both its quality and assortment. In order to satisfy the requirements of the population, there is a persistent need for increasing the production of durum and strong varieties of wheat, rye and such valuable groat crops as millet and buckwheat. The same holds true with regard to the production of grain forage crops. It can definitely be stated that an increase in the production of forage grain is a key problem for creating a strong feed base.

In solving this task, considerable importance is attached to improving the structure of the grain crop plantings, where at the present time the proportion of grain forage crops is all too low (45 percent of the overall area of grain crops), especially pulse crops (4 percent). By way of comparison, allow me to point out that in the U.S.A. grain forage crops occupy 73 percent of the grain plantings, including pulse crops -- 24 percent, and in western European countries the proportion of the latter plantings is in excess of 12 percent.

According to our computations, in order to satisfy fully the country's requirements for bread and technical grain, seed and the grain required for creating reserve funds, slightly more than 50 million hectares of arable land must be sown, that is, approximately 40 percent of the overall area must be occupied by grain crops. The remaining 60 percent of the areas, or more than 76 million hectares, must be used for the production of forage grain. Since, when all other conditions are equal, barley, oats and pulse crops are not only not inferior in terms of cropping power to spring wheat but in fact surpass it, the planned structural improvements in the growing areas are making it possible to increase considerably the gross yield of grain and, it follows, to strengthen the feed base.

In order to eliminate the shortage in feed protein, it is also necessary to expand the sowings of peas, soybeans, alfalfa, clover, lupine, rape and other high protein crops.

In addition to raising the cropping power of the forage crops and lands, some urgency is also attached to improving the quality of all types of vegetable feed and lowering their losses during harvesting and storage operations. Animal husbandry must be based upon intensive and highly productive farming. Thus a preference must be shown for farming when distributing material and financial resources during the Eleventh Five-Year Plan.

Great reserves for increasing the effectiveness of the APK are to be found in proper regulation of the economic relationships between its branches and particularly in the establishment of an equivalent exchange of products.

At the present time, we are observing a desire on the part of the industrial branches to increase their savings through a systematic examination of the prices for logistical resources, for the purpose of raising them. Thus, over the past 15 years (1966-1980), the price for a unit of power in tractors having a set of agricultural machines increased by 83 percent, a unit of mineral fertilizer -- by 60 percent and the cost for 1 ton of mixed feed -- by 63 percent [21]. The rates for production services are also increasing. During the mentioned period, the overall volume of production services provided to kolkhozes and sovkhozes by the enterprises of Goskomsel'khoztekhnika (less trade) increased by a factor of 4 and the total amount of profit obtained by them -- by almost eight times [21].

As a result of non-equivalent exchange, a considerable amount of net income is being withdrawn from agriculture annually [23]. This explains the low profitability of agricultural production. In 1979, the average profitability for kolkhoz production throughout the country was 7.3 percent, sovkhoz -- 11.2 percent, compared to a norm of no less than 30-40 percent [17].

A number of products continue to produce only a small amount of profit. For example, the kolkhozes and sovkhozes for all practical purposes obtain no profit from the production of beef, pork and wool and they operate at a loss in the case of milk, potato, sugar beet and mutton production. Unprofitable operations result in economic instability, they create a degree of tension in the reproduction processes and, a factor which is of great importance, they lower the interest of the farms in increasing output production. Regulation of the system of prices can serve to weaken these negative phenomena considerably.

For the purpose of carrying out the food program successfully, considerable importance is attached to further improving the distribution of the food goods. The introduction of a more severe and thoroughly sound planned basis for the distribution functions will make it possible to supply the populations of cities and villages with products in a more uniform manner, lower transport expenditures and losses during shipments and storage of the products and ensure improved utilization of the labor supplies. This exerts a positive effect on the social climate in the rural areas.

In this regard, very serious attention should be given to the recommendations made by scientists at the Timiryazevskiy Academy concerning the need for strengthening the inter-branch contacts between agriculture and those industrial branches not included in the agroindustrial complex and also for developing the private economy for rural residents. The industrial enterprises can improve considerably the supply of food goods to workers through the creation of subsidiary farms and agricultural departments. It is believed that the time is at hand, during the course of organizing a particular industrial enterprise or complex, to plan not only the requirements for electric power, metal, gas and forestry products, but also the requirements for vegetables, potatoes and milk, while anticipating in advance the sources for covering these requirements.

The private plots of kolkhoz members and manual and office employees play an important role with regard to augmenting the country's food resources. During the 1976-1979 period, the country obtained the following from the private plots: 29 percent of the gross production of milk, 30 percent of the meat, 35 percent of the eggs, 20 percent of the wool, 30 percent of the vegetables, 60 percent of the potatoes and many other products [16]. Up to 25 percent of the income obtained is added to the budgets of kolkhoz families having private plots. It provides the populations of numerous villages and towns with high quality and fresh food products. These plots play an important role from a social standpoint and also with regard to improving the use of natural and labor resources. By promoting the development of the private plots and providing them with assistance in the form of pasture and grazing lands and also through the sale of concentrated feed and milk, the state, without any other additional investments, is able to obtain a large quantity of additional products, including commodity products.

In this regard, the experience accumulated in the VNR [Hungarian People's Republic] in combining large-scale public and small private production operations is deserving of serious attention.

In improving the supply of food goods, very special importance is attached to implementing improvements in the system for procuring agricultural products. Our

present system was developed during the 1930's. And at the present time, notwithstanding the great changes that have taken place in agriculture, the system of procurements for all practical purposes has changed very little. Extremely tense conditions are created during the period in which the procurements are carried out -- transport shipments, elevators, temporary sites, manpower shortages and so forth. This leads not only to great losses in agricultural output during the procurement period, but also during the laying in and placing in storage of such products in substandard condition. Meanwhile, it would be more convenient and profitable to store a portion of the output at the sites for a definite period of time. Towards this end, provision should be made for decentralization in the placement of newly constructed state storehouse facilities, elevators, refrigerators, meat combines, packaging plants and so forth. The construction of kolkhoz and sovkhoz storehouses must be expanded.

The points which we have raised with regard to improving the availability of food goods represent an important but by no means complete complex of tasks, factors and trends which must be taken into account when developing the food program. And the points mentioned underscore the extraordinary complexity of this complex of problems.

Agriculture is one of the most difficult spheres of public production and it imposes special requirements upon the management of modern agricultural production.

Two trends in management which have manifested themselves very strongly in recent years are exerting a very adverse effect on development of the branch. The first has to do with the fact that, despite numerous instructions by the party and government concerning the harm that can be caused by administration, over a period of many years the kolkhozes and sovkhozes have been the recipients of an endless flow of all-possible instructions and this, as is well known, destroys interest and a creative attitude on the part of workers towards their work. During the October (1980) Plenum of the CC CPSU, L.I. Brezhnev stated: "Special importance is attached to raising the responsibility of the personnel, developing initiative in the carrying out of work and preventing petty guardianship and excessive administration on the part of kolkhoz and sovkhoz leaders and specialists."

The second trend -- is that of support for specialized interests by those ministries and departments belonging to the APK, to the detriment of public interests. It is completely obvious that the modern overall approach for the production of agricultural products requires centralized management of the work of the APK and, it follows, the creation of a special organ which could bring together and coordinate all of the factors and trends for developing production operations.

The taking into account of the entire complex of technological natural-economic and social factors and strict coordination of the work of the APK spheres of activity will provide the foundation required for developing the food program and ensuring its successful realization.

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AGRO-ECONOMICS AND ORGANIZATION

PROGRESS IN AGRICULTURAL SECTOR VITAL TO FOOD PROGRAM

Moscow VESTNIK STATISTIKI in Russian No 7, Jul 81 pp 3-15

/Article by Viktor Ivanovich Manyakin, deputy chief of the USSR Central Statistical Administration: "Further Advance of Agriculture Is the Basis for the Food Program"/

/Text/ An impressive description of the profound economic and social reforms that took place in rural areas during the 1970's and the 10th Five-Year Plan was presented at the 26th CPSU Congress. In the course of the systematic implementation of the Leninist agrarian policy of the party after the March (1965) Plenum of the CPSU Central Committee the industrial base of agriculture developed and strenghtened and its relations with other spheres of production were reinforced. Such specialized independent large sectors as water resources and land reclamation, machine building for animal husbandry and fodder production, rural construction and the microbiological industry were established in the country. Tractor and agricultural machine building, the mixed feed industry, production of mineral fertilizers and the processing industry developed greatly. All this taken together forms a single agroindustrial complex, whose main task is a reliable supply of food and agricultural raw materials for the country.

The Communist Party will continue to systematically carry out its economic strategy, whose supreme goal is a steady rise in the people's material and cultural standard of living and the creation of the best conditions for an all-around development of the personality on the basis of the further increase in the efficiency of all public production, rise in labor productivity and increase in the social and labor activity of the Soviet people.

Invariably following the program provision "everything in the name of man, everything for the good of man," the party concentrates its attention on problems, on whose solution the living conditions of the Soviet people directly depend. A special food program of great economic, political and social importance is now being developed in the country. For the purpose of a successful realization of this program the 26th CPSU Congress envisaged ensuring a unified planning and a proportional and balanced development of the sectors of the agroindustrial complex, significant strengthening of its material and technical base, improvement in economic relations among sectors, organization of their efficient interaction for an increase in the production of agricultural products and improvement in their preservation, transportation, processing and delivery to the consumer.

The further advance of agriculture is the basis for the food program. The main trends in the forthcoming work in this sector were envisaged in the decisions of the July (1978) Plenum of the CPSU Central Committee and confirmed by the 26th Party Congress. Rural workers are called upon to strive for a dynamic development and increase in the efficiency of all agricultural sectors, to increase the production and to improve the quality of products and to rationally place agricultural production, keeping in mind a more optimal utilization of the natural conditions of every region in the country.

The maximum possible increase in the fertility of soil and in the yield and the further growth of the production of grain, fodder and other products are the most important tasks of farming. The average annual output of grain during the five-year plan that has begun will have to be increased to 238-243 million tons, including of pulse crops, to 12-13 million tons. The production and purchases of millet, buckwheat, rye, rice, corn and other fodder grain crops is to be increased. The average annual production of sugar beets should total 100 to 103 million tons, of sunflowers, 6.8 million tons, of raw cotton, 9.2 to 9.3 million tons, of vegetables, 29.4 million tons and of fruits and berries, 11.5 million tons.

An increase in the production of livestock products is the very first task in the area of animal husbandry. At the congress this sector was called the shock front in rural areas. On the average, the annual production of meat should increase to 17-17.5 million tons (in carcass weight) and by 1985, to 18.2 million tons. The average annual production of milk is planned in the amount of 97 to 99 million tons, of eggs, no less than 72 billion and of wool, 470,000 to 480,000 tons. The increase in the purchases of livestock and poultry will greatly exceed the indicators of past five-year plans.

The development of animal husbandry depends primarily on an improvement in fodder production and on the satisfaction of the needs of both public animal husbandry and of livestock and poultry privately owned by the population for fodder. For the purpose of a successful solution of this problem plans are made to complete the development and to begin the realization of an overall program for the establishment of a reliable and balanced fodder base for animal husbandry in the country and for the transformation of fodder production on kolkhozes and sovkhozes into a specialized sector.

On the whole, the average annual agricultural output will increase by 12 to 14 percent and its per-capita increase will be twice as high as during the 10th Five-Year Plan. Labor productivity in public agriculture should increase by 22 to 24 percent.

The assignments for an increase in agricultural output are highly stepped-up. Envisaging them, at the same time, the party does everything so that these plans are secured with a balanced, mutually coordinated development of all the other subdivisions of the agroindustrial complex. Almost one-third of all the capital investments in the national economy are allocated for these purposes. The bulk of these investments are allocated directly for the development of agricultural production.

Significant work on expanding the production and technical and on developing the economic base of agriculture has been done recently. In 1980 the fixed productive capital of agriculture tripled as compared with 1965. The consumption of electric power in agriculture quintupled, the delivery of mineral fertilizers tripled and the areas of reclaimed land and the deliveries of tractors, agricultural machinery and equipment increased.

The capital investments for the development of agriculture in the entire set of operations totaled 171 billion rubles in 1976-1980 as compared to 48 billion rubles in 1961-1965. The country's kolkhozes and sovkhozes had never received so many machines, mechanisms, fertilizers and chemical agents for pest and weed control. There had been no such scope of work on irrigation, drainage of water-logged land and improvement of agricultural land.

A total of 1,870,000 tractors, 1,450,000 trucks, 600,000 grain harvesting combines and other agricultural equipment are to be delivered to agriculture during the 11th Five-Year Plan. This will make it possible to complete the overall mechanization of cultivation of the basic agricultural crops, to use industrial flow methods of production and advanced technologies on a large scale and to raise the level of mechanization in animal husbandry and fodder production. The power-worker ratio in agriculture is to be increased 1.5-fold.

As before, chemicalization will develop at high rates. Rural areas will receive almost 100 million tons of mineral fertilizers more than during the 10th Five-Year Plan. By the end of the five-year plan the deliveries of mineral fertilizers will total 115 million tons, of chemical fodder additives for animal husbandry, 5 million tons and of plant protection agents, 650,000 to 680,000 tons.

The chemicalization of agriculture is a long way from its initial forms. The time of programmed harvests has come. The base for this is very solid. More and more fertilizers are produced in the country, their quality becomes better and, therefore, their efficiency is also higher. However, this matter cannot be reduced only to a large-scale delivery of mineral fertilizers to agriculture, although this in itself is of great importance. The transportation and storage of fertilizers should be handled carefully. They should be applied on the basis of an agrochemical inspection with due regard for the characteristic features of every farm. This will serve as a firm base for obtaining the maximum increase in the harvest.

Land reclamation will continue on a large scale. A total of 3.4 to 3.6 million hectares of irrigated and 3.7 to 3.9 million hectares of drained land are to be put to use at the expense of state capital investments alone during the five-year plan. A total of 26 to 28 million hectares of pastures will have to be irrigated in desert, semidesert and mountain regions.

A significant part of capital investments is allocated for the construction and reconstruction of livestock farms, the construction of silage storage facilities, haylage towers and fodder shops and the development of highly productive fodder land. Plans are made to greatly expand road construction, to renew the capacities of procurement organizations and processing enterprises and to build new elevators and storage facilities for grain, potatoes, vegetables and fruits, which is to assist in a reduction of losses of products and in the attainment of high end results at every production section.

Well-arranged dwelling houses, children's preschool institutions, clubs and other projects for cultural-general purposes will be built at outstripping rates in rural areas during this five-year plan. The capital investments for these purposes will increase by 39 percent.

The resources allocated to agriculture are concentrated on such key trends in intensification as the introduction of the achievements of science and advanced experience, reinforcement of rural areas with skilled personnel, improvement in the forms of organization and management of agricultural production, development of specialization and concentration on the basis of interfarm cooperation and establishment of agroindustrial associations and enterprises. "The Basic Trends in the Economic and Social Development of the USSR for 1981-1985 and for the Period Until 1990" determined the goals and ways of attaining them in all the subdivisions of the country's agroindustrial complex.

Important measures are to be implemented in the meat-dairy and food, hulling and milling, mixed feed, microbiological and other sectors of industry. The activity of many of them depends decisively on the development of the country's agrarian shop. At present the end products of the agroindustrial complex, whose sources are agricultural raw materials, occupy 73 percent of the retail trade turnover of state and cooperative trade, including food products, about 50 percent.

The production potential of the agrarian sector of the economy is big as never before and it continues to grow. The decisions of the 26th party congress stress that large financial and material resources will continue to be allocated to agriculture. However, the center of gravity--and this is the distinctive feature of the agrarian policy in the 1980's--now shifts to the return on capital investments, growth of productivity of agriculture and intensification and improvement of its relations with all the sectors of the agroindustrial complex.

An urgent task put forward by the CPSU Central Committee is to maximally ensure an increase in physical output per unit of both the allocated new resources (capital investments) and of the resources that already are in the circulation of agricultural enterprises. Thus, the criterion of increase in production efficiency lies in an increase in agricultural output per unit of combined resources.

In agricultural production the problem of increase in efficiency is extremely important, because almost the entire increase in output in the sector during the 10th Five-Year Plan was attained as a result of labor productivity growth, which is equivalent to saving the manpower of approximately 3 million people.

The fulfillment of the planned assignments approved for the sector is the criterion of efficiency of planned agricultural production leaning on the socialist system of management. Such a criterion of efficiency shows to what extent agricultural production utilized the opportunities and incentives granted it according to the plan. However, the degree of plan fulfillment should not be identified mechanically with the criteria of efficiency of agricultural production. For example, in 1980, owing to exceptionally difficult conditions, agriculture could not fulfill the planned assignments. However, if the results are considered with due regard for the created objective conditions, a conclusion about a high efficiency of production is inevitable. For example, at the level of agrotechnology

and technical equipment of 1965 our country could obtain only 120 million tons of grain in 1980. In fact, however, 189.2 million tons of grain were gathered, which was not only higher than the harvest gathered in 1965, but higher than the average in 1961-1965 as well. Or another example: The year 1975 was unfavorable in terms of weather conditions, nevertheless 140.1 million tons of grain were gathered and, on the average, during the Ninth Five-Year Plan, 181.6 million tons. In 1980, which was also unfavorable in terms of weather conditions, 189.2 million tons were gathered and, on the average, during the 10th Five-Year Plan gross grain output totaled 205 million tons, exceeding the target of 200 million for the first time. At the same time, it should be kept in mind that during the 10th Five-Year Plan 3 years were extremely unfavorable. The stability and systematic growth of grain production during five-year plans attest to the efficiency of agricultural production.

In this connection the development of statistical methods of analysis of the efficiency of agricultural production acquires special importance. At the same time, the determination of the criterion of efficiency is the chief thing. It should be taken into consideration that efficiency depends not only on the resources used for the attainment of specific results, but on the effectiveness of social conditions as well. Although the latter are not connected with the drawing of resources into circulation, they appear as the prerequisite for the attainment of specific results.

Leaning on the achievements of science and technology, the party and the government developed a harmonious long-term overall program for the advance of socialist agriculture. This program envisages an interconnected system of economic, material-technical, organizational and social measures, whose realization makes it possible both to increase the volume of production of agricultural products and raw materials and to solve major social and economic problems of rural areas.

An analysis of the potentials for the development of agriculture shows that the realization of the program for the maximum possible increase in the capital-labor ratio of the workers of kolkhoz and sovkhoz fields and farms and the introduction of a modern organization of production make it possible to reliably protect agricultural production from any types of whims of nature.

The basis established for the further advance of all agricultural sectors is firm. The material incentive of farms for increasing output and for improving its quality has been raised and conditions for a profitable operation of kolkhozes and sovkhozes have been created. The policy of production intensification is implemented systematically. A system of measures to increase the yield of fields, to strengthen the fodder base, to improve the pedigree composition of livestock and poultry and to increase their productivity with a simultaneous growth of stock is implemented in agricultural enterprises.

Along with the development of public production it is important to further assist in the strengthening of the private subsidiary farms of the population and to support the subsidiary farms of industrial enterprises in every possible way.

The implementation of the food program requires the maximum utilization of all available resources. Kolkhozes and sovkhozes have everything that is necessary to increase the output of fields and farms. During the past five-year plan the

capital investments allocated for the solution of this problem increased almost fourfold as compared to the Seventh Five-Year Plan and the obtained mineral fertilizers, fourfold. During that time fixed productive capital increased 3.5-fold. Such a firm basis makes it possible to ensure a significant rise in labor productivity and a fuller return on every ruble invested in the economy. Specialists have estimated that, for example, in animal husbandry with the same size and structure of the herd, but with a provision of 30 quintals of fodder units per head of livestock, right now it is possible to produce 10 to 11 percent more output than is now produced by farms. On a countrywide scale this amounts to millions of tons of milk and meat. This means that the whole question is how to best utilize these possibilities and what potentials should be activated primarily. It is important to concentrate attention on those who help to attain a fundamental increase in efficiency. When carrying out specialization, we must be able to look ahead and to visualize efficiently and clearly what we acquire and what momentary advantage should be given up voluntarily if it can result in a big loss in the future.

To control efficiency is to creatively analyze the results and to find the most rational ways of improving all work. With the present interdependence of various production units success in one area will certainly be reflected in another area and work must be managed so that this achievement may lead to a new success.

The growth of agricultural output requires accelerated rates of development of food and light industries and transport--everything that forms the unified food complex. Efficiency can be attained only if all the units of the complex operate harmoniously and reliably as a single organism. This means that its management should also be overall. Such a situation by no means exists everywhere. A great deal of output is still lost during transportation, processing and storage.

All these problems, which thus far have been solved inefficiently, now are considered top-priority. Discussing the decisions of the 26th CPSU Congress, labor collectives take a great deal into account in their plans.

An increase in efficiency is a quantitative, as well as qualitative, growth. To be sure, to give more output from the same land and from the same production areas is an achievement. However, it is very important what this costs. What were the labor and material expenditures on production and what is the quality of output. There are still many cases in which farms under the same natural and climatic conditions and with the same material and technical base attain totally different results. On some output grows and on others it remains on the same level for several years, or is even reduced. There are many such kolkhozes and sovkhozes in Kurskaya, Kalininskaya and Yaroslavskaya oblasts. A great deal depends on where funds are invested. Experience shows that on farms where special attention is given to the reconstruction of farms, introduction of advanced technologies, training of personnel and solution of social problems, things are invariably successful. A state approach to the solution of this problem is especially important. Unfortunately, departmentalism and localistic tendencies are still felt. They quite often manifest themselves in organizations and enterprises servicing rural areas, during the procurement of vegetables, fruits, potatoes and other products, in construction and during the repair of equipment. For example, the organizations of the Main Administration of Volga Water Construction were instructed to establish in Volgogradskaya Oblast irrigated systems on a number of farms in order to grow fodder for livestock farms and complexes. Wishing to attain the greatest effect for

itself, the Main Administration of Volga Water Construction began to build irrigation areas not where they are needed, but in places convenient for the work of water management organizations. Only the interference of people's controllers will rectify the situation.

To obtain a little more profit at the partner's expense is not a virtue. Such "enterprise" is more like a fraud. Usually, managers who do not know how to manage, who are not skilled in methods of scientific labor organization and whose sense of responsibility for the common cause has become dull resort to it. They think nothing of deviating from a cooperation contract and of presenting a distorted statistical report so that they may look well. In the search for the easy way they are prepared to breach planning-financial and state discipline.

"The stage of mature socialism and the scientific and technical revolution," said Comrade L. I. Brezhnev at the session of the USSR Supreme Soviet on 18 April 1979, "place increasingly higher demands on the mechanism of economic management, presuppose its further improvement and require extensive and purposeful organizational work.

"We need an efficient and coordinated activity of the entire managerial staff, real responsibility of every person for the work entrusted to him and a persistent fight against breaches of state discipline, all kinds of excesses, mismanagement and abuse."

To attain higher goals is a task of great state importance facing agricultural workers during the 11th Five-Year Plan. Socialist competition, a creative and innovative approach to the fulfillment of plans and obligations and a persistent and purposeful fight for an increase in production efficiency and in the quality of all work--this is the practical way to success.

It is well known that the fodder base of animal husbandry is one of the acute problems. There is a shortage of fodder, owing to which we fail to obtain hundreds of thousands of tons of meat, milk, wool and other farm products. At the same time, on many kolkhozes and sovkhozes there is a large overexpenditure of fodder, because the rations of animals are not nutritiously balanced and fodder is fed to livestock in unprocessed form. Less than one-half of all the forage grain received on farms is utilized in the form of mixed feed in a number of oblasts. For this reason it is used much more than the norm. In other words, thousands of hectares of plowed, sown and managed land, which produced a harvest, essentially were of no benefit to society.

According to our estimates, to fulfill the assignments for an average annual production of meat, milk, eggs and wool envisaged by the 26th CPSU Congress for 1981-1985, we will need no less than 600 to 700 million tons of fodder units, including 250 to 270 million tons of fodder units of concentrates, 200 to 220 million tons of fodder units of pasture fodder and 100 to 120 million tons of fodder units of coarse, succulent and other fodder. A total of 450 to 460 million tons of fodder units, including 150 million tons of concentrates, were used in 1980.

The production of all types of industrial fodder is to be developed at more rapid rates during the 11th Five-Year Plan. Plans are made to significantly expand fodder production on the basis of microbiological products and of the utilization of the waste of food, dairy and fish industries.

The decree of the CPSU Central Committee and the USSR Council of Ministers on an overall development of fodder production in the country for the period until 1985 envisages measures to improve field fodder production and natural hayfields and pastures and to increase the application of fertilizers to fodder crops, as well as considerable volumes of reclamation work. Measures for the mechanization of all fodder production processes, introduction of advanced technologies of fodder procurement and preparation for feeding and transfer of this sector to an industrial basis were envisaged.

Animal husbandry represents a sector with the most favorable conditions for the introduction of industrial methods of farm management. When solving problems connected with the industrialization of animal husbandry, it is necessary to take into consideration its growing dependence on industry. This concerns the mixed feed industry, building production and scientific and technical services for animal husbandry.

To intensify animal husbandry, it is necessary to establish and organize the output of new machinery and equipment, to develop new breeds of livestock, to build the most efficient barns, to use the latest scientific achievements in the area of veterinary engineering and science and to implement a whole system of measures for the organization of industrial fodder production on the basis of the mechanization of farming and increase in the yield of grain and fodder crops, especially pulse crops, expansion of land reclamation and improvement in meadow cultivation.

The basic potentials for the sector's intensification lie in developing the specialization and concentration of production in every possible way, ensuring its gradual transition to an industrial basis, reconstructing existing livestock and poultry farms with due regard for the use of new equipment and technology, ensuring an increase in the production of meat, especially beef and poultry, through an intensive breeding and fattening of young large-horned cattle and expansion of broiler poultry breeding, developing specialized beef cattle husbandry, increasing the intensity of hog breeding, basically lending it meat specialization, expanding the production of bacon pork, greatly increasing the stock of cows on kolkhozes, sovkhozes and other state farms, raising the milk productivity of cows, greatly improving herd reproduction and ensuring a further increase in the stock of sheep and goats, rise in their productivity and so forth.

Essentially, the industrialization of animal husbandry represents an important stage in a qualitative change in the entire structure of agricultural production, in the internal relations between farming and animal husbandry, on the one hand, and in the external relations of all agriculture with industry, on the other.

Therefore, the development of animal husbandry should be planned completely for 15 to 20 years. Only with such an approach will it be possible to outline the solution of a number of fundamental problems connected with the implementation of the long-term program for the distribution of animal husbandry and the processing industry, fodder production, fodder storage and breeding of pedigree livestock, especially beef cattle, of which there is a shortage in the country. Long-term planning is also especially important, because the further development of the microbiological and mixed feed industry is connected with the development of animal husbandry. Owing to its nature the microbiological industry requires large investments and its interconnection with animal husbandry presupposes the need for long-term forecasts.

The wide program for the further rise in the people's well-being envisaged by the 26th CPSU Congress encompasses the most diverse aspects of the life of the Soviet people. The real per-capita income will increase by 16 to 18 percent. The average monthly wages of workers and employees will rise by 13 to 16 percent and the wages of kolkhoz members in the public sector, by 20 to 22 percent. The chief thing is to improve the supply of food products for the public. This is a serious economic, as well as political and social, problem. After all, people's health, mood and labor activity depend in large measure on how their needs for food products are met. That is why the party believes that radical measures must be taken to solve this problem.

Intensification of a single food complex is a major general economic task. Its ultimate end presupposes two interconnected processes, that is, an increase in output per unit of land area and an increase in finished output per unit of the obtained raw materials. An increase in the yield of agricultural crops and in the productivity of livestock is connected with scientific and technical progress in the area of production. The use of improved means of production connected primarily with an increase in soil fertility and with the utilization of highly productive plant varieties and livestock breeds is the most important lever here. The process of increasing finished output is a much more complex matter than ensuring the growth of production. An intersectorial coordination of the most various spheres, that is, agriculture proper (reduction of losses during harvesting and initial processing of nonstandard output), transport (shipment without losses), procurements (storage with minimal waste), industry (reduction of losses during processing), trade, the service sphere and so forth, is the main characteristic of this aspect of intensification. The work of all these spheres, as well as the distribution of capital investments and other resources, must be subordinated to the ultimate end--improvement in food supply. In this connection the system of planning indicators and material incentives should interest the workers of every unit in delivering as much high-quality output as possible to the consumer.

All this objectively requires active work on an improvement in the planning and stimulation of agriculture and on a rise in the level of all planning and economic work on kolkhozes and sovkhozes, which was envisaged by the July (1978) and subsequent plenums of the CPSU Central Committee. On the basis of this the CPSU Central Committee and the USSR Council of Ministers adopted the decree "On Improving the Planning of and Economic Incentives for the Production and Procurement of Agricultural Products," which established a unified plan for the purchase of products for 5 years with an annual breakdown. This procedure economically directs farms to the attainment of the end result--the maximum possible increase in the output of farming and animal husbandry, increase in production efficiency and work quality and strengthening of the economy of kolkhozes and sovkhozes.

For the purpose of intensifying the interest of kolkhozes and sovkhozes in increasing the production and procurement of farm and animal products the decree envisages the payment during the 11th Five-Year Plan of a 50 percent purchase price increment for the sale of products in excess of the average level attained during the 10th Five-Year Plan to the state. This level will be invariable for the determination of the quantity of output for which a price increment must be paid in every year of the five-year plan.

In the country in the last few years interfarm cooperation and agroindustrial integration have been carried out actively and its relations with industrial sectors have expanded and become more complicated. "... Agricultural production," Comrade L. I. Brezhnev pointed out at the November (1979) Plenum of the CPSU Central Committee, "should not be considered separately from the system of procurement, transport, storage and processing of and trade in food products. All this is a single food complex." This fundamental instruction verified by our entire economic practice also indicates that the problem of intensification of agriculture should no longer be considered apart from the intensification of the entire food complex formed in accordance with the demand of objective economic laws.

A firm policy of a systematic intensification of agricultural production was adopted at the March (1965) Plenum of the CPSU Central Committee. Many key trends in this problem were worked out and further developed at the subsequent plenums of the Central Committee, at CPSU congresses and in party and government decrees. Solving it, the party and the state changed in a planned manner the intersectorial proportions in the distribution of capital investments in favor of agriculture. Whereas during the Fifth, Sixth and Seventh Five-Year Plans the share of this sector in all capital investments ranged within 17 to 20 percent, during the Ninth and 10th Five-Year plans it comprised more than 27 percent. Owing to this, during the last two 5-year periods agriculture has obtained additional capital investments in the total amount of 93 billion rubles, which is equal to all the capital investments during the Fifth, Sixth and Seventh Five-Year Plans taken together. A total of 171 billion rubles were allocated for the development of this sector during the 10th Five-Year Plan alone.

What is the return? Despite the unfavorable weather conditions during 3 out of 5 years, agricultural output based on the sum total of the years increased by 9 percent, or by 50 billion rubles, as compared to the Ninth Five-Year Plan, and 1.5-fold, as compared to the Seventh Five-Year Plan. As compared to the Ninth Five-Year Plan the average annual grain output increased by more than 23 million tons. The production of raw cotton, sugar beets, vegetables, meat, milk, eggs and wool increased. The value and physical volumes of output produced by agriculture are large, but the sign of equality cannot be placed between them and the end results.

In connection with this a methodologically substantiated concept of the agroindustrial complex arose and a point of view of the intersectorial nature of intensification began to be formed. Such an approach made it possible to overcome the departmental limitation in the concept of intensification and made it possible to determine the combined amounts of capital investments for the intensification of the entire production complex. The intensification of agriculture was defined as a major intersectorial task in the decisions of the 25th and 26th congresses of the Communist Party and of the July (1978), November (1978 and 1979) and October (1980) plenums of the CPSU Central Committee. Orientation toward final national economic results is clearly observed in such an approach to the intensification of agricultural sectors.

One of the principal goals of intensification of the food complex lies in the maximum reduction of losses both at the stage of production and at the stage of storage, transportation and processing. The November (1979) Plenum of the CPSU Central Committee stressed that in the provision of a continuous and coordinated operation of all the links of the chain that connects the field or the farm with

the consumer "... everything is equally important--transport and production of containers, storage and processing of products and, finally, trade." These spheres of the complex ensure, so to speak, a secondary form of intensification--a rational utilization and saving of agricultural raw materials--that is, an increase in finished output per ton of produced grain, meat, milk, fruits and vegetables.

First of all, it is necessary to significantly improve the system of storage of agricultural products. It is more convenient and advantageous to store a certain part of them on the kolkhozes and sovkhozes themselves for some time. This will make it possible to improve the quality of products, to reduce their losses, to lower the load on centralized storage facilities, of which, unfortunately, there is still a shortage, and to use transport and manpower more uniformly. Therefore, an expansion of the construction of kolkhoz and sovkhoz warehouses and storage facilities is an important potential for a reduction of losses of agricultural products, to which the 26th CPSU Congress drew special attention.

Losses of agricultural products in the sectors of the agroindustrial complex are due to the fact that at present "... the sectors called upon to ensure the transportation, storage and processing of everything that is produced by rural areas do not keep up with the development of agriculture. The construction of elevators and the commissioning of capacities for the processing of sugar beets, meat, dairy products, vegetables and fruits lag behind the assignments of the five-year plan. Their distribution throughout the country's regions also leaves much to be desired," said Comrade L. I. Brezhnev at the November (1978) Plenum of the CPSU Central Committee.

It should also be kept in mind that the output-capital ratio of agricultural output is very high and, therefore, the expenditures on the prevention of losses of agricultural products are always lower than the expenditures on the development of new land (from which it is necessary to obtain additional output) and than the additional investments allocated for the production of additional products. For example, according to our estimates, the expenditures on the procurement and storage of and trade in potatoes, vegetables and fruits are one-third of those on their production. "It is quite obvious," writes L. I. Brezhnev in the book "Tselina" /Virgin Land/, "that much less effort and capital is needed for saving products that have already been produced than for producing them. This means that such a path is profitable, meets the party policy for an increase in efficiency and, most importantly, meets the people's interest."

The strengthening of the material and technical base of agriculture and the increase in the power-worker ratio made it possible to reduce the expenditures of manual labor. At the same time, the problem of an efficient utilization of agricultural resources increases. This was stressed with special force at the 26th CPSU Congress, which considered it necessary to increase the demand for a rational utilization of funds and equipment so that the strengthening of the material and technical base may be more perceptibly reflected in the level of food supply for the country. The party teaches us that no matter how the wealth of our society grows, the strictest economy and thrift remain the most important condition for the development of the national economy and for a rise in the people's well-being. "The economy should be economical," it was proclaimed from the tribune of the 26th CPSU Congress.

The formation of the necessary material and financial reserves is extremely important for the further growth and proportional and balanced development of agricultural production, because without them under the conditions of sharp fluctuations in the weather it is impossible to successfully carry out the wintering of livestock and, in practice, to raise the productivity of livestock during this period. Reserves of seeds, building materials, fuel and funds are also needed.

The organization of procurements of agricultural products occupies a significant place in the intensification of the food complex. The acceptance by procurement officials of products on kolkhozes and sovkhozes is one of the advanced forms. The organization of procurements of vegetables in Leningradskaya Oblast, where all 23 specialized sovkhozes, on the whole, fulfill the oblast plan for the delivery of vegetables to Leningrad, deserves a positive evaluation in this respect. On every farm there are sale centers, in which all the conditions for a quick transfer and acceptance of products on the basis of quantity and quality are created. The use of transport has improved sharply. The acceptance of livestock on farms in the Lithuanian SSR also gives positive results.

The problem of an efficient utilization of the existing production and economic potential of agriculture is connected with the fact that progress in its intensification is based on the appropriate technological structure and on the sector's constantly rising organizational level. Under the conditions of scientific and technical progress a highly efficient utilization of agricultural equipment is a decisive factor in the attainment of the highest results. Meanwhile, the forms of its servicing remain the same. It is not only a matter of increasing the output of spare parts. Practice confirms that no intermediary between industry and agriculture is able to assume the full responsibility for ensuring a continuous operation of the delivered equipment. This means that repairs of equipment by the forces of the manufacturing plant are needed. Such repairs will not only make it possible to greatly increase the actually worked time of the delivered equipment during the period of its normative functioning, but will also ensure an improvement in design work on the refinement and development of new machines. Furthermore, the manufacturing enterprise will become responsible economically for the output of equipment, which will operate continuously on kolkhozes and sovkhozes.

The main trends in the present agrarian policy of the party include measures for the creation of stable economic conditions for agricultural management and for the attainment of a balanced development of all the components of the agroindustrial complex. Party decisions obligate us to more profoundly deal with problems of price formation both for agricultural and industrial output delivered to this sector and for services. At the same time, special attention is drawn to the economic substantiation of prices and their more efficient utilization as an effective lever in the further development and improvement of agricultural production.

Cases in which the productive force of the new equipment received on kolkhozes and sovkhozes grows more slowly than the price of this equipment have been observed in the last few years. For example, the price of the new Niva combine increased by approximately 50 percent as compared with the price of the SK-4 combine, although the capacity of its thresher rose by 35 percent. The price of the new T-150 tractor increased 2.6-fold as compared with the price of the T-74 tractor, while the capacity of its motor doubled. To be sure, the price should reflect the socially necessary expenditures on the production of a specific product and ensure their recovery, as well as the necessary accumulation for the manufacturer

for expanded reproduction. An undue excess of price over value cannot contribute to the development of intensification of agricultural production and to an increase in its efficiency. The cost accounting interests of industrial enterprises delivering equipment to agriculture should be built with due regard for the totality of the complex relations between the socialist industry and kolkhoz-sovkhoz production.

The July (1978) Plenum of the CPSU Central Committee noted that as yet it was not possible to attain well-organized cooperation among partner sectors and to completely eliminate some negative phenomena in this matter. They are expressed primarily in the fact that the proportions of exchange between agriculture and industry have not been formed in favor of agriculture recently. An increase in the means of production delivered by industry leads to an increase in the cost of agricultural production, lowers the profitability of kolkhozes and sovkhozes and has a negative effect on the processes of expanded reproduction.

It should also be constantly kept in mind that natural factors have a great effect on the results of work of agricultural enterprises. The diversity of production conditions under which new equipment operates leads to differences in the efficiency of its utilization on individual farms. The shortcomings in the organization of the utilization of new equipment also have an effect. As a rule, it is more powerful and requires considerable expenditures on the reconstruction of the entire set of production conditions. The lack of an overall solution of the problem of introduction of new equipment lowers the efficiency of additional capital investments.

The problem of reequipment of agriculture is just as far-reaching. Here it is necessary to reorganize the industrial unit of the national economic agroindustrial complex. Science makes it possible right now to foresee fundamental changes in the power engineering of agriculture and in the technology and system of machines for farming and animal husbandry. Exceptionally favorable possibilities are created for the planned development of agricultural science, which is the direct force that determines the development of farming and animal husbandry along the path of intensification.

An accelerated commissioning of productive capacities and projects is an important factor in the improvement in the relations between agriculture and industry. A reduction in the number of newly started construction projects will make it possible to reduce the volume of incomplete construction. At the same time, an improvement in the structure of capital investments and an increase in the share of expenditures allocated for the production of equipment in them are of especially great importance. The policy of capital investments and the system of planning and report indicators should be directed toward this.

Under the conditions of developed socialism, of the fundamental reequipment of agriculture, of the transition to improved, advanced and new methods of management of agricultural production and of the introduction of new technology statistical organs are entrusted with important tasks resulting from the decisions of the 26th CPSU Congress for an improvement in statistical indicators characterizing the agrarian-industrial complex as a whole and, primarily, the food program, not individual isolated processes. It is necessary to establish a system of indicators uncovering the mechanism and degree of effect of individual factors in intensification and showing the cause and effect connections of the processes and phenomena

taking place in agricultural production. The task of a more profound economic analysis for the purpose of uncovering the reserves of agriculture and of drawing them into the sphere of efficient utilization is no less important.

The accountability report by Comrade L. I. Brezhnev, general secretary of the CPSU Central Committee, to the 26th party congress clearly determined the main areas of work and the key problems requiring the greatest attention and concentration of effort and disclosed the ways for the development of agricultural production. Urban and rural workers are working actively and selflessly on the fulfillment of the extensive overall program for the development of agriculture, in which strategic, economic and social tasks, present goals and future interests are linked closely.

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CSO: 1824/392

AGRO-ECONOMICS AND ORGANIZATION

SUBSIDIARY FARM DEVELOPMENTAL PROBLEMS

Unfulfilled Contracts in Tbilisi

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 27 Jun 81 p 2

[Text] The subsidiary farm of the Tbilisi Aviation Plant imeni Dimitrov is considered a full-fledged shop. Tens of tons of meat and poultry, many eggs, milk and vegetables come from there to dining rooms and food counters for workers and employees of enterprises.

The management is constantly concerned with development of the subsidiary farm; this is provided in fact by a collective agreement reached between it and the factory trade-union committee in the name of the collective of workers and employees.

The Dimitrovites' example is not a solitary one. But it should be said at the outset: the opportunities inherent in collective agreements are being used far from completely. In the Summary Report to the 26th CPSU Congress, Comrade L.I. Brezhnev noted "... that our trade unions at times lack initiative in the use of their broad rights. They are not always insistent in regard to questions of fulfillment of collective agreements, labor safety..."

In recent years, the number of bilateral agreements in the republic has grown almost threefold. This growth cannot but help make one glad, inasmuch as increasingly more workers are being drawn into management of production. But the collective agreements of a number of enterprises and organizations lack items reflecting improvement of working conditions, implementation of sanitary-health measures and the development of a network of cultural-educational institutions.

It is worthwhile drawing attention to the following consideration. If, let us say, no clarity exists in the provisions on bonuses or vacation schedules are completed hastily without account being taken of the wishes of different categories of workers, this justifiably creates dissatisfaction. Such "trifles" often grow into conflict situations.

Consequently, on beginning the present campaign for the conclusion of bilateral agreements, collection of proposals from workers and employees at republic enterprises began as early as May of last year. Over the course of several months, the plans were the subject of interested discussion at labor collectives and on the pages of the large-circulation press. Responsible party, soviet and trade union

took direct part in preparing and conducting meetings and conferences at which collective agreements were concluded for this year and reports were heard on their fulfillment last year.

Such an approach, we believe, is justifiable. It serves to enhance the role of collective agreements not only in the solution of production and economic questions but also social ones. The broad participation of the workers of the Tbilisi Electric Locomotive Building Plant imeni V.I. Lenin in the making of a new agreement made it possible to concentrate attention on yet unsolved questions. The new commitments provide for hot meals to all production shifts, wide-scale introduction of a preferential subscription system of payment, ordering tables and making available several thousand square meters of housing. There are to be built sanatoriums-preventoriums, a polyclinic and a sports and health-improvement complex. It is planned to expand the subsidiary farm and to build hothouses and forcing beds.

A direct connection exists between the work indicators of an enterprise and the extent of use of the collective agreement. At the Gardabani Cardboard-Rubberoid Plant the plans for production and sale of products and labor productivity have not been fulfilled for several years, and labor and production discipline is low. Bilateral commitments are consistently not being attained. Thus, according to the totals for only six months of last year, of the 109 measures provided by collective agreements, 44 were unfulfilled. Moreover, they pertained to wages and norm setting of labor, social insurance, medical services, arrangement of rest and public dining. The trade-union committee ignored these problems. It is no accident that the plant's collective no longer trusted the committee chairman, D. Imnadze, and did not elect him at the election meeting for the next term.

The top management of the All-Union Gidromekhanizatsiya Trust and of Gruzneft' Production Association satisfied the petitions presented by trade unions to fire the chief of the trust's construction administration, N. Belov, and the chief power engineer of the West Georgian Drilling Administration, G. Tsomaya. Such a measure was due to the fact that at enterprises which they managed labor-safety rules and practices were regularly being violated.

We acknowledge that it is essential to improve control over the fulfillment of bilateral agreements. You even collide with practice when you return to it once a year for tallying of the results. But a real effect is obtained only in the case where an effective check of performance is made. For example, at the Tbilisi Aviation Plant imeni Dimitrov, five permanent commissions were created for this. Their members include foreman V. Tsiklauri, milling-machine operator N. Nazarov, assembler M. Ovsyannikova and many others who display adherence to principle; they are meticulous and stubborn when dealing with defending the interests of their comrades at work. The results of the checks are discussed quarterly at a meeting of the plant trade-union committee. Thus, the committee for labor safety, headed by designer Sh. Ebanoidze disclosed the violation of schedules in the fulfillment of a number of points of the collective agreement. Plant director P. Tordiya issued an order on the results of this check.

The collective agreement today determines the interrelations of management and the labor collective in the solution of most diverse problems. For the purpose of exercising more skillful and systematic control, it was decided to create as a social service a special inspectorate attached to the Trade-Union Council of Georgia. Its

membership includes representatives of leading departments. Similar units have been created for oblast councils and republic and oblast committees of sectorial trade unions.

It should be said that the initial steps disclosed the effectiveness of such a form of control. The inspectorate has already checked on the fulfillment of collective agreements at Tbilisi enterprises--Sovetskaya Gruziya Worsted Cloth Combine and Gruzsel'mash. A comprehensive approach, close operation with the technical and legal labor inspectorates and departments of the trade-union council have made it possible to deeply penetrate into the state of affairs and to make concrete recommendations.

All work relating to the conclusion of collective agreements and control over their fulfillment is conducted within the framework of the requirements of the 26th CPSU Congress, where mention was made of the need for further strengthening the role of trade unions and labor collectives in the solution of problems of labor, life and living conditions of people.

Feed, Transport, Equipment Needed

Moscow TRUD in Russian 5 Jul 81 p 2

[Text] There is a subsidiary farm near Vinnitsa which keeps simultaneously about 5,000 pigs. In the summertime, the number doubles (there are open areas); with the building of a second section of the complex, up to 13,000 of the animals could be fattened here at any one time.

The Vinnitsa City Trade Organization for Trading in Food products has a subsidiary farm. It was established with the aid of city and oblast enterprises and is now called the Yakushinetskiy Fattening Sovkhoz.

The complex with the help of patrons has become viable; the animals gain in weight daily almost 500 grams.

We repeat: the farm is large and, of course, it must be provided with all the necessities. Up to now the big concern was the construction of animal-husbandry buildings, a feed shop, storehouses; with the help of enterprises no particular difficulties were incurred. But now? Let us listen to what sovkhoz director S. Babiyko has to say.

"You cannot get big weight gains solely from food wastes. Mixed feeds are required, transport is required. And where would you get all this? Moreover, is this a kind of operation where the director can acquire by whatever means spare parts, tools, mechanisms?"

Actually, who should help? The oblast trade administration to which the sovkhoz belongs? No way.... Selkhoztekhnika "does not recognize" the subsidiary farm. According to conservative estimates, Yakushinetskiy Sovkhoz needs five tractors, two trailers, special machines for food wastes, a dump truck, a grab.

Where do you get them? The UkSSR Ministry of Trade has the duty of handling this, but for it this is a hard nut to crack. So far the ministry has allocated one

tractor and is promising a bus. It would seem that the republic planning organs ought to take into account the needs of large subsidiary farms. Without a strong material base, it would be difficult for them to develop.

Sovkhoz workers are grateful to patron enterprises which have generously helped the subsidiary farm: radio-engineering apparatus and tractor-assembly plants and the oblast repair and construction trust. But patrons' resources are also not without limit. It would appear to be a trifle to turn over or to sell to the sovkhoz obsolete equipment for the repair shop, a written-off lathe, tools; but they cannot do this. According to prescribed procedure, all of this goes into scrap metal. The sovkhoz does not have funds of its own: hence it tries to acquire such things wherever it can by one means or another.

The last question that was discussed a great deal at the sovkhoz was its own reproduction of swine. The farm can solve this problem. But when it comes to increasing the number of young animals, the land area would have to be expanded to have a solid fodder base. The Vinnitskiy Oblispolkom, enlisting the aid of the UkSSR Ministry of Trade, turned to the republic Council of Ministers with a request for securing arable land adjacent to the sovkhoz. The question is still being resolved.

This is a worthwhile cause. The decisions of the 26th party congress provide for the development and implementation of a unified food program. An important role in improving the supply of foodstuffs to the population is bound to be played by subsidiary farms of enterprises.

The Yakushinetskiy Sovkhoz provides for the dining rooms of Vinnitsa one-tenth of the meat products of the state fund. In the near future, it will be able to provide yearly more than 11,000 quintals of pork. This would be a solid addition to workers' tables.

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CSO: 1824/412

AGRO-ECONOMICS AND ORGANIZATION

POTENTIAL OF AGRARIAN SECTOR OF NONFERROUS METALLURGY DISCUSSED

Moscow SEL'SKAYA ZHIZN' in Russian 31 Jul 81 p 2

/Article by P. Lomako, USSR minister of nonferrous metallurgy: "The Sector's Agrarian Potential"/

/Text/ Nonferrous metallurgy can be classified with national economic sectors operating under very complex natural conditions. The collectives of many mines, concentrating factories and metallurgical plants work in not easily accessible regions of the Far North, Central Asia, Siberia and the Far East.

Of course, this circumstance leaves a certain mark on the nature of food supply for enterprises. Along with centralized supply sources we pay much attention to the establishment and development of subsidiary farms.

The agrarian sector of our branch was formed a long time ago. It now includes 86 sovkhozes and other smaller subsidiary enterprises and 153 hog fattening centers and has 57,000 hectares of arable land, tens of thousands of head of livestock and a large poultry stock. During the past 5-year period alone these farms delivered 45,000 tons of meat, 169,000 tons of milk, 285 million eggs and about 180,000 tons of potatoes and vegetables to the sector's collectives.

Not a single sector of the national economy now has the right to avoid participating in the accelerated development of agriculture. This should be done both through an increase in the output of products for the development of the country's agroindustrial complex, for example, fertilizers, and through an increase in the production of food products with our own forces. To increase agricultural production during the 11th Five-Year Plan means to take the next step on the path of accomplishment of the task of continuously supplying the population with food products. The experience of many of our subsidiary farms, for example of the "agrarian shops" of the Bogoslovskiy Aluminum Plant and of the Krasnotur'insk Mine Administration in the north of Sverdlovskaya Oblast, attests to the great capabilities of industrial enterprises in this matter.

Established during wartime, it went through a period of transformation and flourishing in the 1970's. At that time the managers of the local administration of workers' supply and of a number of our sector's enterprises realized that the problem of supply of food products for workers could not be solved on the basis of small diversified farms. It was proposed that the principles of production

concentration and specialization be applied. Only in this case did capital investments give a weighty return. The funds invested were sizable. Suffice it to say that the fixed capital of the subsidiary farm totals 10 million rubles. It has five mechanized cow houses and a large hothouse combine. Every square meter of its 4 hectares yields 33 kg of vegetables. A total of 1,200 highly productive cows are kept in livestock barns. The subsidiary farm was transformed into a large-scale agrarian production facility supplying fresh vegetables and whole milk to metallurgists. While its two departments specialize in the output of finished products, two others are engaged in an auxiliary, but very important, cycle--raising of succulent and coarse fodder, perennial grass seeds and young large-horned cattle. The reliable fodder base makes it possible to systematically increase the productivity of animals. Last year the milk yield of cows reached 3,000 kg there.

The Tayezhnyy Sovkhoz and the Noril'skiy Sovkhoz located in the permafrost zone give thousands of tons of meat, milk and vegetables to the workers of the Noril'sk Mining and Metallurgical Combine. The subsidiary farms of the Povekskiy Ore Dressing Combine, of the Krasnoyarsk Aluminum Plant, of the North Ural Bauxite Mine and of the Yakutalmaz Association attain high indicators of production efficiency.

The active help of industrial collectives and their ability and desire to consider the "green shop" a production component just as important as any other technological unit serves as one of the main conditions for success. This is precisely how the Noril'sk Combine approaches the development of the subsidiary farm. This combine annually allocates more than 1 million rubles for the construction and purchase of equipment to the Tayezhnyy Sovkhoz and its workers participate in potato and vegetable harvesting.

In all, during the past five-year plan our branch invested about 44 million rubles in the development of its agrarian sector. During the 11th Five-Year Plan these expenditures will total about 60 million rubles.

However, it is not only a matter of amounts of capital investments, but of the return on them as well. This year we expect to obtain more than 12,000 tons of meat, almost 37,000 tons of milk and more than 43,000 tons of potatoes and vegetables from the ministry's subsidiary farms. Subsequently, the return on subsidiary farms should increase even more. For this it is necessary to constantly search for and place new potentials for an increase in the efficiency of agricultural production at the service of this cause.

We see these potentials primarily in the consolidation of farms. Now more than one-half of them have up to 200 hectares of arable land. Under such conditions it is difficult for farms to intensify animal husbandry, providing it with their own fodder. Advanced enterprises realize the importance of expansion of land areas. For example, last year the Sverdlovsk Administration of Workers' Supply developed 123 hectares of land. Furthermore, meadows and pastures were improved fundamentally on 200 hectares and acid soil was limed on 736 hectares.

The Bratsk, Krasnoyarsk and Sayan aluminum plants, the Sadon Lead and Zinc Combine and the Severovostokzoloto Association work in the same direction.

The scale of agricultural work is expanding. In the Russian Federation and Kazakhstan in the next 2 years 160,000 hectares of new land will be allocated to us for the establishment of new subsidiary farms. There is no doubt that this decision is correct. However, thought must be given to a more rapid development of the quite sizable areas granted to the sector for agrarian needs.

Today the rates of development of land and improvement in meadows and pastures within the sector cannot be considered satisfactory. After all, hardly more than one-tenth out of the 500,000 hectares allocated to us for agricultural use is arable land.

The achievements of advanced collectives show how much can be done with the use of local initiative and our own forces. However, when large-scale work on draining swampy land and irrigating semideserts is involved, we cannot manage without the help of the Ministry of Land Reclamation and Water Resources.

Of course, the development of arable land and expansion of land areas are important ways of strengthening the fodder base. However, of no lesser importance is the increase in the yield of crops. Many examples in which, as a result of thoughtful care and skillful observance of agrotechnical rules, rich harvests of grasses and fodder root crops are obtained on the fields of subsidiary farms located even under severe climatic conditions can be cited. However, here too there is a problem, whose solution is outside the sector's scope. It is the provision of our farms located in northern regions of Sverdlovskaya and Magadanskaya Oblasts, Krasnoyarskiy Kray and Yakutia with perennial grass seeds. Only 8 to 10 percent of the orders for these seeds are met.

Planning the further development of subsidiary farms for the 11th Five-Year Plan and, at the same time, following the provisions of the decree of the CPSU Central Committee and of the USSR Council of Ministers adopted in December 1978, the ministry outlined a number of measures to strengthen the responsibility of industrial enterprises for the activity of their agricultural subdivisions. A decision to transfer all subsidiary farms to the balance of enterprises for basic activity was made and the post of deputy director of agriculture and workers' supply was introduced. A program for the construction of barns for large-horned cattle, hogs and poultry, as well as of hothouses, is being implemented. The circle of plants, combines and mines acquiring their own agrarian shops is becoming increasingly wider. The experience of the best collectives is generalized at annual seminars and is examined at the meetings of the ministry board.

This experience shows the great possibilities for improving food supply for collectives that exist in the localities and the great opportunities that open up when work is organized properly. It is only important to find a correct and sensible combination of the planning principle with local initiative.

Our sector can do a great deal for the solution of the food problem with the forces of the collectives of enterprises, but its capabilities are not unlimited. It is necessary to better meet the needs of subsidiary farms for specialized reclamation equipment--stump pullers, trench diggers, brush cutters, polyethylene film for covering hotbeds and mineral fertilizers.

Apparently, other industrial branches, which more actively engage in the development of the agrarian sector of its production, are in the same situation. As the scale of work increases, it is necessary to more attentively take into consideration the needs of subsidiary farms of enterprises for certain types of resources, meeting these needs through a state system of material and technical supply.

During this five-year plan our sector faces very serious and responsible tasks connected with a further increase in the production of nonferrous metal. A total of 12,500 workers of our subsidiary farms, along with collectives of metallurgical plants, mines and concentrating factories, also take part in the accomplishment of these tasks.

To increase the productivity of animal husbandry and the yield of agricultural crops on subsidiary farms means to make an appropriate contribution to the fulfillment of the decisions of the 26th CPSU Congress aimed at a further rise in the well-being of the Soviet nation.

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CSO: 1824/395

MORE AGRICULTURAL ECONOMISTS NEEDED IN RURAL AREAS

Kiev RADYANS'KA UKRAYINA in Ukrainian 21 Jul 81 p 2

[Article by Oleksandr Yahol'nyk: "Rural Economist"]

[Text] The chairman of the May Day Kolkhoz in Snyatynskiy Rayon, Ivano-Frankovskaya Oblast, twice Hero of Socialist Labor and deputy to the USSR Supreme Soviet Yu. T. Lychuk, likes to say: "A person becomes rich not through great income but through small expenditures." Yustyn Todorovych even asked an amateur artist to prepare a poster bearing these words and hung it in a prominent place in his office.

Of course wise manager Lychuk is well aware of the one-sidedness of this expression, for the farm he heads is famous precisely for its high income. As a knowledgeable economist, however, he cannot help but see the profound content in this saying.

A recently issued CPSU Central Committee and USSR Council of Ministers decree entitled "On Intensification of Work on Economics and Efficient Utilization of Raw Materials, Fuel-Energy and Other Resources," states: "The course taken by the party toward improving the efficiency and intensification of the economy aims at production results increasing more rapidly than outlays on production and on achieving more with fewer resources."

The kolkhoz and sovkhoz economist is positioned, one might say, on the front lines of the struggle for efficiency in the village, for the nerve endings of all branches converge on him, and it is he who has the opportunity to specify optimal variants of production specialization and concentration and key points of application of funds and resources. At the same time he also performs an "everyday" function -- he keeps watch on the cost of producing a kilogram of milk and bread, the return on a minute of labor, a quintal of fertilizer or kilowatt hour of electricity, and he teaches people to have a thrifty attitude toward the people's pursestrings. Precisely such traits are characteristic of the economic service of the Kolkhoz imeni Suvorov in Novoselitskiy Rayon, Chernovitskaya Oblast, which for two decades now has been headed by a person who truly loves her profession -- Hafiya Ivanivna Yeftemiy. Thanks to her enthusiasm, energy and experience, the best public economic analysis office in the oblast has been established, scientific-practical conferences are held on a regular basis, and information leaflets and economic bulletins are put out and distributed in the livestock units and work brigades; a shop structure and factor analysis have been adopted on the kolkhoz. All new developments of value in economic practices are quickly adopted here. Therefore the farm is steadily improving, year by year, in its socioeconomic development.

There are many such examples.

Very often, however, one hears complaints about the economic service.

"The more equipment, the more complex production processes become," stated M. P. Korbutyak, first secretary of the Galichskiy Rayon Party Committee in Ivano-Frankovskaya Oblast, "and the more intensive the flow of information which one must assimilate in order to make the right decisions. And at the present time economists are receiving little assistance in this. You instruct someone to analyze the structure of production costs and you are not sure whether this will be accomplished on schedule and with good quality...."

Such statements are no rarity. And we must add that they are not without basis. It is true that many economists lack efficiency, competence, a sense of the new, and the ability to assess a given production situation from the standpoint of economic effectiveness. Hence we have formalism in organization of cost-accounting subdivisions, economic analysis offices and balance-sheet commissions, a superficial approach in summing up the results of financial-economic activities of kolkhozes and sovkhozes and determination of the reasons for poor return on capital, as well as serious oversights in the activities of certain farms and entire regions.

Here is an example. In the 10th Five-Year Plan the average annual value of the fixed assets of kolkhozes and sovkhozes in Ivano-Frankovskaya Oblast increased by 64 percent, while average annual gross output increased by only 14 percent. In the Ninth Five-Year Plan 68 rubles worth of gross output was produced per hundred rubles in fixed assets, while in the 10th Five-Year Plan the figure was only 47.4 rubles. Labor productivity is declining on many farms, and profitability is worsening.

Why is the level of production not in keeping with capital investment in agriculture? What is due to objective causes and what is due to errors of omission by specific executants and miscalculations in organizational matters? Economists should closely examine and investigate these processes, to gain an understanding of trends which have developed or are developing in the economy, and to find "cures" to correct the situation.

Is it only a matter of their conscientiousness? Let us bear in mind the fact that the economist is a comparatively new figure on the farm. In its initial stages of development, the agricultural economic service frequently focused on ordinary office work.

Of course today the situation has changed in many places. Some places they have even bought economists office equipment, since this is the latest fad. It is a pity, however, that the abacus has been replaced by modern calculators, while an incorrect understanding of the essence of economic work has remained.

"Our primary task," states N. O. Holovchak, chief economist on the Kolkhoz imeni Kalinin in Galichskiy Rayon, "is to improve the economic mechanism, to improve planning, to adopt cost accounting, and yet we spend days on end collecting and putting together progress reports, information sheets, memoranda and summary reports."

"We have calculated," adds Z. P. Dashavets', deputy chief of the Ivano-Frankovskaya Oblast Agricultural Administration, "that purely office tasks take up more than 40 percent of an economist's working hours."

It is said that Julius Caesar was able to do three different things at once. Some economists have even outdone this ancient Roman, for they are compelled at practically one and the same moment to write an information update while at the same time performing the functions of typist, obtain data over the phone for their next report, and immediately transmit this information to higher authorities.... And in addition he must drive out into the rayon (a specialist with a college degree!) and deliver statistics, and disseminate among the production sections bulletins containing the performance results of the previous day.... A Jack-of-all-trades! But the specialists are not happy about this diversity of activity.

Recently a number of new services have been established in the rayon agricultural administrations -- dispatcher, scientific organization of labor, legal, and state agricultural technical supervision. Now chief safety engineer positions are being introduced. These "staff holes" are frequently patched at the expense of the economic service. In some rayons things have even gone so far that this service is in the person of the service chief alone. Things are not much better as regards this matter at the higher level -- in the oblast agricultural administrations.

Under the circumstances, how can one do analytical work on a regular and systematic basis, and how can one master the finer points of one's job? One can only guess how many cracks in the economy of farms have developed because of this, and how many incorrect decisions and unsubstantiated organizational-technical measures have been adopted!

There is also a social aspect to this problem in addition to the economic aspect. A questionnaire was distributed at the schools of one of the rayons in Khmel'nitskaya Oblast, asking the question "What do you want to be when you grow up?" Hundreds of career choices were named in the pupils' replies, including agricultural professions. Even such rare ones as engineer-animal specialist and microbiologist. But nobody chose economist-planner or accountant. These professions evidently did not enter into the future plans of the 10th-grade pupils. Their explanation: "No prestige."

And yet agriculture is perhaps in greatest need of these specialists. And frequently there is a shortage of economists not because few are being turned out by our higher educational institutions but because they fail to remain in their jobs. Obviously not every specialist will agree to copy papers day after day! Sometimes persons without suitable training are employed as chief economists. Model regulations state that "specialists with a higher or, in exceptional cases, with secondary economics education and appropriate practical experience shall be employed" for such positions. In actual fact, however, only 106 of the chief kolkhoz economists in Chernovitskaya Oblast, for example, possess a higher education, that is, somewhat more than one half. In many cases the reins of agricultural economics are in the hands of individuals who have a rather vague idea of how and where to guide the economic "cart."

And many organizational foulups occur! Countless problems occur because economists have little knowledge of progress in achieving cost-accountability targets. In the meantime the economic service indeed plans and communicates them to the executing individuals, while calculations are performed by ...the accounting office, and employing quite different methods. The performance results of the cost-accountable subdivisions reach the kolkhoz or sovkhoz manager's desk between the 25th and 30th of the following month, when for all practical purposes it is too late to make corrections and adjustments.

Documentation on labor record keeping and wages is also handled by two agencies: the accounting office keeps records and figures on labor expenditures, while supervision of payroll fund disbursements is handled by the chief economist and rate setter, although their signatures do not appear on these documents. How do they exercise oversight? Symbolically?

The economist's signature is also lacking on bank documents pertaining to financing capital investment. Just try to put an end to those overexpenditures which have already been financed by State Bank offices.

The same applies to statistical accounting. The signature of the chief accountant appears on the various statistical accounting forms. In actual fact, however, this is handled by the chief economist, who collects the required data, analyzes primary documents, and informs brigade leaders and livestock unit managers. The excessive parallelism and duplication sometimes give rise to misunderstandings and even conflicts between the planning-economic department and the accounting office. What is the solution? A solution is suggested by the practical experience of the kolkhozes and sovkhozes of Donetskaya and Khar'kovskaya oblasts, where they have consolidated planner-economists and accountants in a single economic service.

However, economic matters fall not only within the narrow realm of specialists. The scope of operations on every farm is such that no economic service can keep things running smoothly if the farm machinery operators and milkmaids do not possess thorough knowledge in this area, if the masses are not drawn into economic activity, if agronomists, animal specialists, engineers and other agricultural specialists do not help solve the problems of capital-output ratio, profitability, and production cost. One still frequently hears, however, the statement that it is our business to grow the crop, harvest the grain, produce milk and meat; it is the economists' business to analyzer labor expenditures and calculate return on land, equipment, and fertilizers....

Such an attitude is dictated by a number of circumstances, especially the fact that at higher educational institutions and secondary vocational schools specialists, while acquiring basic knowledge in the area of technology, become insufficiently acquainted with such subjects as planning, record keeping and control, organization and economics of agricultural production, as well as analysis. We must also mention specific features of the present system of material incentive for farm specialists and managers. An agronomist, for example, can receive a bonus in the amount of six months wages with an increase in the sale of sugar beets or sunflower seed to the state above the average level over the preceding three years. He will receive a bonus of ...one month's wages for 10 percent overfulfillment of gross income and profitability indices for the crop production branches (we should state that it is extremely difficult to achieve such an increase). Incidentally, "points" in socialist competition are earned only on the basis of gross, without taking economic indices into account....

As we see, there are many problems. Some of them can be resolved locally, while others require the intervention of republic or even union ministries and agencies. However, if we truly want to prove the effectiveness and performance results of an economist's labors, it is necessary to proceed with realistic, practical actions.

Today agriculture is at a phase in development when every step forward must definitely be examined from the standpoint of potential economic consequences and end results.

Thus it is necessary to break the bonds of traditional views of economic service being a "second-rate profession," to come up with a new approach to the economist, to insist that this is one of the central figures in the mechanism of economic management -- thus pulling the entire chain more taut. For in the final analysis we must admit that at the present time in many instances we are merely talking about economic categories, although everybody knows full well that no matter how many times one says "sugar, sugar" -- a sweet taste will not appear in one's mouth.

"Economics should be economical-- that is a demand of the times," stressed Leonid Il'ich Brezhnev at the 26th CPSU Congress. For those who bear this in mind, economic indices always end up with additional tons and quintals and make it possible in the final analysis to increase output and to utilize production potential with due return on effort.

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CSO: 1811/62

BETTER UTILIZATION OF AGRICULTURAL EQUIPMENT URGED

Moscow MATERIAL'NO-TEKHNICHESKOYE SNABZHENIYE in Russian No 6, Jun 81 pp 15-22

/Article by L. Khitrun, chairman of the USSR State Committee for Supply of Production Equipment for Agriculture: "Agricultural Equipment Must Be Utilized More Fully"/

/Excerpt/ The extensive program for social and economic reforms and for a further rise in the well-being of the Soviet people outlined by the 26th CPSU Congress is inseparably connected with the development of the country's agrarian-industrial and food complex and increase in its efficiency. "We will continue to allocate big financial and material resources for rural areas and to systematically transfer this sector to an industrial basis," Comrade L. I. Brezhnev, general secretary of the CPSU Central Committee, said at the 26th party congress. "However, the center of gravity--this is the distinctive feature of the agrarian policy in the 1980's--now shifts to the return on capital investments, increase in the productivity of agriculture and intensification and improvement of its relations with all the sectors of the agroindustrial complex."

Following this instruction, we will have to increase the efficiency of utilization of land, machinery, fertilizers and fodder and the yield of all crops. We must constantly manifest concern for an improvement in the skills of personnel, persistently introduce the recommendations of science and the best Soviet and world experience into practice, further equip agriculture and increase the durability and reliability of the machinery and equipment supplied to rural areas.

The activity of our system will continue to be subjected to a steady increase in the production of agricultural products and labor productivity growth in all agricultural sectors. We will be able to attain this through an acceleration of technical progress in agriculture, active search for and introduction of the most efficient forms of utilization, repair and servicing of equipment, improvement in the material and technical supply of kolkhozes and sovkhozes, high organization of installation and finishing work and quality fulfillment of transport and many other services.

The USSR State Committee for Supply of Production Equipment for Agriculture has a large production base. During the 20 years of the system's existence the fixed capital of subordinate enterprises increased tenfold, now totaling 14 billion rubles. During the 10th Five-Year Plan the production potential increased by 40

percent. Repair enterprises of a total capacity of 600,000 conventional repairs, 900,000 square meters of warehouse premises and stations for the technical servicing of motor vehicles of a capacity of 140,000 vehicles were put into operation. More than 5 million square meters of living space were built. All this created favorable prerequisites for the fulfillment of the assignments of the 10th Five-Year Plan.

The five-year plan for production activity and commodity turnover was fulfilled ahead of schedule--by 6 November 1980. Products were produced and work was done in the volume of more than 43 billion rubles for kolkhozes and sovkhozes and material and technical facilities worth more than 100 billion rubles were sold. This is 1.3 times as much as during the Ninth Five-Year Plan. Almost 10 million tractor combine engines were repaired and worn out parts worth 1.7 billion rubles were restored. Many livestock farms and barns were fully mechanized. Equipment was installed at 1,200 large complexes and 10,000 grain drying centers. More than 40,000 large facilities for the preparation and storage of fodder were put into operation.

Assignments for labor productivity growth were fulfilled. Overall systems for controlling the quality of output and automated control systems were introduced at many enterprises. The system annually trained more than 400,000 machine operators for kolkhozes and sovkhozes.

At present agriculture has a powerful machine pool. It receives almost 2,000 types of machines. More than 400 types of new machines were developed and accepted for equipping during the 10th Five-Year Plan.

The increased volumes of equipment deliveries enabled kolkhozes and sovkhozes to fully mechanize the presowing preparation of soil, sowing of grain and industrial crops and harvesting of grain crops. The periods of sowing of grain crops were shortened to 6 days and the harvesting of sugar beets, to 17 days, of silage crops, to 19 days and of grain crops, to 23 days. The level of overall mechanization of labor intensive processes on large-horned cattle farms increased to 42 percent, on hog breeding farms, to 64 percent and on poultry breeding farms, to 73 percent.

Evaluating the work done positively, we must not forget that as yet agriculture does not have an optimal machine and tractor pool making it possible to fulfill the entire set of agricultural operations strictly within the agrotechnical period. More than 16 million people, or about 70 percent of the workers, are still engaged in manual-horse operations on kolkhozes and sovkhozes. Therefore, an accelerated supply of new equipment for agriculture and a further rise in the level of mechanization are important conditions for a successful fulfillment of the assignments of the 11th Five-Year Plan for an increase in the production of agricultural products. Mechanization of labor processes in agriculture has now become an inseparable factor in the intensification and transfer of labor to an industrial basis.

Modern agriculture requires an increase in material and technical facilities, as well as the development of a system of mechanization, which will ensure a continuous fulfillment of all operations within the best agrotechnical periods. On the basis of these requirements a machine system taking into consideration all the soil and climatic zones in the country was developed and approved by the appropriate

ministries and departments for the 11th and 12th five-year plans. The participation of about 50 ministries and departments, as well as CEMA members, in their development and manufacture was envisaged. The following figures attest to the scale of forthcoming work in this important area. As compared with the system of machines that operated during the 10th Five-Year Plan, the total number of technical facilities in the new system increases by 619 items at the first stage (1981-1985). In all, it includes about 3,600 technical facilities. A total of 1,600 new types of machines will have to be developed in 10 years. As a result of their introduction the rates of reequipment in rural areas attained in the 1970's will be doubled.

The current 5-year period should become an important stage in the mastering of fundamentally new machines--powerful row-crop tractors, rotor grain harvesting combines, self-propelled machines for different purposes, precision drills, chainless wide-cut units, a new generation of antierosion equipment, machines for uniform fertilizer application, low- and ultralow-volume sprayers, overall equipment for fodder preparation and installations for the utilization of renewable sources of energy.

Calculations show that the introduction of new equipment will make it possible to reduce labor expenditures in plant growing by an average of 30 percent. The economic effect from its use will total 5.5 billion rubles. Labor expenditures will be reduced by 4.5 billion man-hours. As compared with the productivity in 1980, this is equivalent to the disengagement of almost 3 million average annual workers.

Large-scale specific work will have to be done to ensure the introduction of the machine system. The enterprises of the State Committee for Supply of Production Equipment for Agriculture, which represent the engineering service of agriculture, and all its workers should constantly remember that the introduction of new equipment and industrial technology is their first duty. Specific measures for a wide commissioning and utilization of new equipment and for an improvement in technical propaganda have now been developed. This direction in our activity should be under the constant control of all managers, from a rayon association to a Union committee.

Large material and monetary assets are allocated for the implementation of scientific and technical progress in agriculture and equipment of kolkhozes and sovkhozes with modern machinery. Incurring such expenditures, the state has the right to demand that every machine give the maximum return, be utilized highly productively and be preserved well.

It must be stated, however, that there are still shortcomings in the utilization and preservation of equipment. The annual downtime of tractors for technical and organizational reasons on kolkhozes and sovkhozes totals 54 to 58 million tractor-days. This comprises 12 to 14 percent of their allocated annual work time.

The decree of the CPSU Central Committee and the USSR Council of Ministers "On Additional Measures To Ensure the Preservation of Equipment in Agriculture" envisages specific measures to improve the technical operation and quality of repairs of agricultural machines. Main emphasis is placed on an accelerated development and increase in the efficiency of operation of repair enterprises and shops, stations and centers for technical servicing, especially those servicing power saturated tractors, and shops for the repair of grain, sugar beet and fodder harvesting combines.

The state of affairs with the provision of cadres of mechanization experts for agriculture and with an improvement in their skills causes special concern in a number of places. The shortage of specialists leads to the fact that the growth of the tractor pool in some oblasts, krays and Union republics outstrips the quantitative growth of mechanization experts. In the Armenian SSR there are 77 mechanization experts per 100 tractors, in the Estonian SSR, 81 and in Kaluzhskaya, Orlovskaya and Chitinskaya oblasts the total number of mechanization experts was even reduced.

In connection with the lack of provision with cadres of mechanization experts the problems of an efficient utilization and quality servicing and repair of equipment acquire great importance. The introduction of efficient forms of utilization plus the provision of a constant high technical readiness of equipment represent the great potential, owing to which it is possible to shorten the time of performance of field operations, to raise the level of mechanization and to lower the expenditures on its maintenance.

As is well known, in the country there is a wide search for advanced, new forms of utilization and servicing of equipment. Interfarm associations for the mechanization and electrification of agriculture operate on farms in Stavropol'skiy Kray and Mogilevskaya and Kurgan-Tyubinskaya oblasts, as well as in 30 rayons of all the Union republics. The unification of the basic means of mechanization and establishment of a single engineering service make it possible to more productively utilize the available technical potential, to better maneuver equipment and labor resources and to more fully interest specialists and mechanization experts in the final results of work. The organization of state-cooperative associations creates the basis for the implementation of a single technical policy in agriculture.

Despite the little production experience, the new forms of organization of equipment utilization in agriculture confirm their efficiency and give positive results. It is necessary to continue to keep the work of state-cooperative associations under constant control, to give them all possible help and support and to improve production and economic relations.

Ensuring an overall and flow system is an indispensable condition for the efficiency of utilization of all material and technical facilities. This increases the total productivity of machines and tractor units to 20 percent. We have adopted the Ipatovo method--a tested means of increasing labor productivity and of more fully utilizing the technical capabilities of machines. It should be stressed that the Ipatovo method is not simply a concentration of equipment in a separate field. It includes a wide range of organizational, production, social-economic and cultural-general measures jointly connected and directed toward one goal.

Practice shows that, where work is done at the necessary organizational level and administration is competent, the efficiency of equipment utilization is increased, operating costs are lowered and spare parts and petroleum products are saved.

Purposeful work on the establishment of specialized repair plants and shops, increase in their production capacities and improvement in the quality of repairs is constantly done in republics, krays and oblasts. Nevertheless, it must be admitted that the results of activity of some repair enterprises do not meet modern

requirements. Some repair plants and shops in their technical level lag behind modern requirements. Therefore, they perform repair operations with violations of specifications. The repair and service base is not uniformly distributed everywhere. In a number of the country's regions sufficient attention is not paid to the establishment of a repair base. This has a negative effect on the utilization of machinery and equipment.

The repair and maintenance service should activate all the existing potentials for maintaining the vast machine pool in a working order. During the 11th Five-Year Plan the workers of this service will have to meet the need of rural areas for major repairs of machinery and for its servicing, especially of power saturated tractors and the equipment of petroleum facilities, and the need of technical exchange centers for the distribution of units and assemblies to farms, as a rule, on the day of delivery of the repair stock.

I would like to single out two most acute aspects of this sphere of activity. The quality of repair output is the first. The organization of the restoration of worn out parts is the second.

We pay constant attention to an improvement in the quality of repair work. A number of collective decisions have been adopted and orders have been issued at all the levels of management. There are many scientific studies and new technical solutions. At the same time, the quality of repair work at some enterprises does not yet meet the level of implemented organizational and technical measures. The output of incomplete and poor-quality products, overexpenditure of spare parts and repair materials and violations of specifications are tolerated. There are especially many cases of low-quality repairs in the Udmurtskaya ASSR, in Kurskaya, Khersonskaya and Turgayskaya oblasts and even at such major enterprises as the Shil'da Motor Repair Plant and the Irkutsk Motor Vehicle Repair Plant.

The poor provision with machine tools and industrial repair equipment has an effect on the quality of output. Unproductive and obsolete machine tools make up the bulk of the pool. Therefore, there is an urgent need to most rapidly resupply repair enterprises with high-precision machine tool equipment. It is necessary to persistently work in this direction. However, another thing is also indisputable. The attained technical level of repair enterprises and the skills of personnel right now make it possible to sharply increase the quality of output and the efficiency of production and to more fully utilize the available capacities.

The further improvement in repair production is inconceivable without intensifying the work on metrological support, improvement in the tool stock, concentration of the machine tool pool and strenghtening of mechanic's services. The certification of products, introduction of an overall system of quality control and improvement in the training and retraining of personnel should occupy a special place in work.

The delivery of products on the first demand by a worker, brigade, shop and collective has a significant effect on end results. Such a form of labor organization should become the norm for all enterprises. It is necessary to subject the quality of labor of workers of various occupations to a public evaluation every day, to widely use the brigade form of labor organization and to increase the militancy of socialist competition for an improvement in the quality of output. It

is advisable to regularly hold "Days of Quality of Output." Such a form of meeting between the repairman and the mechanization expert and between the customer and the executor makes it possible to promptly uncover shortcomings and to improve the quality of output.

In the organization of the repair and technical servicing of the pool great importance is assigned to the restoration of worn out parts. As a result of this it is possible to greatly improve the quality of repair, to lower its production costs and to reduce the expenditure of spare parts. It is necessary to approach the collection of worn out parts in a new way and to develop and widely use the appropriate technologies and accessories. Advanced technologies, as well as the utilization of new materials, including powder materials, should be introduced at accelerated rates. Their use is highly effective both in the restoration and reinforcement of parts.

The Remdetal' Scientific Production Association will have to be strengthened and the coordination of work of scientific research and design organizations will have to be improved. It is necessary to study and widely disseminate the system's advanced experience in the shortest time. This will contribute to the fulfillment of one of the main tasks, which is to increase the proportion of restored parts to 30 percent of the new ones. This means that the volume of restored parts should be increased to 800 million rubles annually, that is, in practice, be doubled. This will require the necessary capital investments and material and technical resources. They will be searched for so that this important sphere of activity of the USSR State Committee for Supply of Production Equipment for Agriculture singled out into a special overall object program may be developed properly.

Important tasks must be accomplished in the area of overall mechanization of livestock farms. Their realization is entrusted to installation administrations, mobile mechanized columns, line-installation sections and other structural subdivisions of the system. This service has at its disposal fixed capital worth more than 1 billion rubles. A total of 300,000 people work there. The annual production program exceeds 1.6 billion rubles. During the past five-year plan the level of industrialization of installation work rose to 27 percent. The productivity of installation work almost doubled. Labor expenditures were reduced. All this made it possible to accelerate the commissioning of projects. The Kherson Installation Trust, the Orlovskiy Sel'khozmontazhkomplekt Association and others attained good results.

Life has confirmed the advisability of centralized technical servicing of the equipment of large livestock complexes and poultry breeding and hothouse combines. Special services have already been established in Moldavia and in a number of oblasts in the RSFSR and the Ukraine. In the next 2 or 3 years the state committees for supply of production equipment for agriculture of the Union republics and kray and oblast associations should fully meet the requests of industrial-type agricultural enterprises for technical servicing.

At the same time, there are serious shortcomings and oversights in this area of work. First of all, the low volumes of work on the reconstruction of livestock barns should be mentioned. The task is to raise the level of overall mechanization

on large-horned cattle farms to 62 percent, on hog breeding farms, to 70 percent and on poultry breeding farms to 90 percent by the end of 1985. The reequipment and reconstruction of existing farms and complexes are the main ways for its realization. The volumes of installation of equipment in fodder kitchens, grain threshing floors, boiler rooms, hothouses and so forth will have to be increased considerably.

It is very important to widely disseminate the experience in production and economic relations between rayon agricultural equipment associations and kolkhozes and sovkhozes during the performance of operations in animal husbandry. Its essence lies in the fact that farms increase their demands on the good working order of farm equipment. They evaluate the work of agricultural equipment associations on the basis of the end results in animal husbandry.

Providing agricultural enterprises with all material resources is an important aspect of our work. The determination and substantiation of the need of agriculture for material and technical facilities improved and contractual discipline was strengthened during the 10th Five-Year Plan. Measures were taken to find additional potentials for a fuller satisfaction of the needs of kolkhozes and sovkhozes during an intense period of agricultural work. The specialization and concentration of supply services continued and the mechanization of freight processing was introduced. Advanced, new forms of supply were further developed. The skills of the workers of this sector were improved. The material base was also strengthened. A total of 1,000 warehouses were reconstructed. Such modern warehouse complexes as Krasnodarskiy Kray, Belorussian Republic, Rostovskaya, Permskaya, Irkutskaya and Kuybyshevskaya oblasts and other complexes were put into operation. The construction of six zonal spare part bases was begun.

During the 11th Five-Year Plan it will be necessary to continue the improvement in material and technical supply and, in particular, to introduce the delivery of material and technical facilities in full sets to kolkhozes and sovkhozes everywhere. Sets of machines and completed flow lines should be formed at this stage. This work should be done on the basis of scientifically substantiated engineering and economic calculations and coordinated with the plans for the production of agricultural products and with the approved zonal technologies. Jointly with agricultural organs it is necessary to determine the optimum pool of machines and its long-range rational structure.

It will be necessary to improve transport services for rural areas through the strengthening of the production base and concentration of the motor vehicle pool, rise in the level of its technical readiness and improvement in the management of the entire transport process. The organization of the delivery of goods sold to the consumer on free-to-farm terms is to be completed everywhere. In particular, Kurskaya, Ryazanskaya, Astrakhanskaya, Tambovskaya and Kirovskaya oblast agricultural equipment associations, where the level of centralized delivery is still low, will have to do a great deal of work on this.

The volumes of deliveries of material and technical facilities will greatly increase during the current five-year plan. In order to deliver them to the consumer in the full quantity during the appropriate periods, while retaining their

quality, it is necessary to more widely introduce advanced forms of supply. This represents a significant potential for a reduction in costs and for the implementation of the policy of economy. For example, in 5 years about 400 million tons of petroleum products are to be delivered to agriculture. It turns out that 1 percent of saved petroleum products alone is equivalent to 300,000 tons of fuel annually. It is necessary to regulate the delivery of petroleum products to kolkhozes and sovkhozes, to organize proper storage and to improve the supply of capacities, petroleum equipment, spare parts and facilities for servicing them for farms.

The USSR State Committee for Supply of Production Equipment for Agriculture together with republic committees developed an extensive program of measures for the further improvement in the organization of material and technical supply for agriculture, outfitting of the projects under construction, mechanization of loading and unloading work at trade bases and rise in the service standard. A great deal will have to be done for a successful fulfillment of the outlined program.

The scientific research and planning organizations of our system are to contribute to an efficient and qualitative solution of the problems set for the USSR State Committee for Supply of Production Equipment for Agriculture. Today we have a comparatively large scientific potential. We have more than 190 scientific research and planning institutes and design and other organizations. Automated control systems have 115 information computer centers, in which 180 computers operate.

These organizations do specific work on the transfer of enterprises to an intensive path of development. At the same time, we must not fail to note some oversights in their work. This is primarily the insufficient generalization and utilization of advanced experience accumulated in our system and of related sectors. In a number of cases a low level of research is tolerated, completed studies are introduced into production slowly and forces and funds are dissipated.

The collectives of scientific research and planning-design organizations and of computer centers will have to eliminate the existing shortcomings. It is necessary to ensure a more efficient coordination of scientific research, to more boldly develop a sectorial automated control system, to attain a fuller provision of enterprises with peripheral equipment, to improve the formation of initial information and to expand the training of the necessary personnel. The time has come to ensure in practice an organic combination of production plans and plans for scientific and technical progress. The assignments for labor productivity growth, mechanization of processes and reduction of expenditures should be backed by the appropriate organizational, technical and economic measures.

The further dynamic development of our system should be continuously accompanied by an improvement in the planning and organization of labor and material incentives, by the detection and utilization of internal resources and by the introduction of cost accounting. We will have to reinforce the economic service at all the levels of management with experienced, highly skilled specialists and see to it that their business-like qualities and authority are increased.

Special attention must be given to the introduction of the brigade form of labor organization. Experience convinces us that this form greatly increases the stability of collectives and creates in them an atmosphere of comradely strictness

and mutual assistance and of great responsibility of every worker for a qualitative fulfillment of assignments and a careful attitude toward the utilization of materials, an efficient utilization of labor resources and labor productivity growth.

A total of 31 percent of the workers of repair enterprises are now employed in brigades. A total of 800 brigades were established in construction and installation work and more than 1,000 brigades in motor transport (in harvesting). During the current five-year plan the brigade form should become the predominant form in all the sectors of production activity.

The transition to the planning and evaluation of the activity of enterprises on the basis of the indicator of net output is an important means of increasing the efficiency of their operation. The use of this indicator makes it possible to more accurately evaluate the work done by a specific enteprise, contributes to the intensification of control over wage expenditure and prevents a chase after production volume. All this meets the interests of kolkhozes and sovkhozes and will serve as a good measure of improvement in production relations between enterprises and farms. Extensive preparatory work will have to be done in order to ensure the introduction of the new principle of planning at all repair plants in 1982.

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31 Aug. 1981